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Spring planting intentions. . . Oats outlook. . . Farm credit. . . Argentina's economic crisis. . . China & NIS trade prospects

Farm Credit Use to Expand Moderately in 2002

Farm lending, which has been growing since 1992, is expected to rise again in 2002. Last year, U.S. farmers held $192.8 billion in farm loans. For 2002, a rise of 1.9 percent to $196.5 billion is forecast, the smallest annual growth in a decade. With limited or no gains in farm commodity prices expected this year, following the relatively low levels of 2001, and uncertainties about future levels of direct government payments, farmers and lenders may be more cautious about adding debt. Also moderating credit demand are high levels of direct government payments to farmers in recent years, adequate levels of working capital, and sizable off-farm earnings.

Interest Rates on Farm Loans To Increase During 2002-03

Borrowers, including farm borrowers, are likely to encounter rising interest rates in 2002 and 2003 after enjoying declining rates since mid-2000. The upward pressure comes from the economic rebound that began in late 2001, stronger business credit demand, tighter domestic monetary policy, and gradually accelerating economic growth. Farm loan rates are expected to increase less than most interest rates because of a historic adjustment lag.

Soybean & Cotton Plantings to Decline in Favor of Corn in 2002

Planting intentions in 2002 for the eight major U.S. field crops amount to 248.3 million acres, nearly identical to last year's plantings despite widespread weak price signals. Corn planting intentions are up 4 percent from last year, due partly to reduced fertilizer costs for corn production and lower anticipated returns for competing crops. Crop rotation considerations and uncertainty about the farm bill may also draw acreage from soybeans to corn, contributing to the slight intended reduction in overall soybean area. Wheat plantings continue to decline.

Oats Market Strong in 2001/02

Oats, least prominent of the feed grains, have gained attention as prices climb and buyers scramble to ensure supplies. The U.S. currently imports about 30 percent of its total oats supply, primarily from Canada. While world stocks are projected to increase due to larger global production, stocks of high-quality milling oats are projected to decline significantly—e.g., in Canada. The tight domestic supply of high-quality oats in 2001/02 is due to weather problems in the upper Midwest, and in the oats-growing regions of Canada, Sweden, and Finland.

Argentina's Economic Crisis: Can the Ag Sector Help?

A simple resolution to Argentina's severe economic crisis does not appear imminent. Although devaluation of the Argentine *peso* could eventually generate an export-led recovery, agricultural production and exports will likely be hindered by new export taxes, capital controls, higher input prices, and tight credit conditions. To improve cash flow and reduce expenses, Argentine farmers may switch some corn production to a soybean-wheat double-cropping rotation using fewer manufactured inputs.

Could the NIS Region Become A Major Grain Exporter?

Western analysts have predicted that reform in the New Independent States (NIS) of the former Soviet Union could transform the region from a large grain importer (as during the Soviet period) into a major grain exporter. The ability of the NIS region to become a major grain exporter depends mainly on whether or not it can produce grain at a relatively low cost. Recent research by USDA's Economic Research Service indicates that relative production costs of outputs and inputs compared with other producing countries do not currently support large NIS grain imports or exports.

Farmland Protection Programs: What Does the Public Want?

Public support has been growing for government farmland protection programs. Behind this support is the perception that farmland produces more for society than food and fiber, such as scenic views, environmental benefits, and maintaining an agrarian heritage. Designing and implementing a cost-effective farmland protection program that provides the greatest possible benefits requires an understanding of public preferences for particular amenities, as well as which amenities are best provided by preserving farmland.

China: En Route to a New Role In Global Agriculture

Beyond the headline-grabbing events that have recently captured the attention of analysts and policymakers is a larger picture of China's evolving role in agricultural markets. As China grows, develops, and integrates with the world economy, it is likely to become an even larger and steadier customer for agricultural imports. At the same time, China could become a competitive exporter of fruits, vegetables, fish, meat, and poultry if its production were modernized, its marketing infrastructure improved, and food safety and animal health issues resolved.

Jack Harrison

Farm Credit Use to Expand Moderately in 2002

Credit plays an important role in helping U.S. farm operators acquire the assets they need to compete in a capital-intensive industry experiencing rapid advances in technology. In 2001, U.S. farmers owed $192.8 billion in farm loans, an amount that has been growing since 1992 and is expected to increase again in 2002. Low farm prices for several key commodities in recent years and uncertainties about future levels of direct government payments have created some concerns regarding farmers' continued access to adequate credit and the willingness of credit suppliers to meet their needs.

Total farm business debt in 2002 is forecast to rise by $3.7 billion—or just 1.9 percent—to $196.5 billion. This will be the 10th consecutive annual increase, but represents the smallest annual growth since debt dipped slightly in 1992. With limited or no gains in farm prices expected this year following relatively low levels in 2001, farmers may be more cautious about adding new debt. Also, the farm sector and its lenders learned from the farm financial crisis of the 1980s that borrowing does not substitute for adequate cash flow and profits.

Slower debt growth partially reflects moderate levels of expected new capital investments. Also, adequate levels of working capital and sizable off-farm earnings are expected to help farmers hold down new borrowing.

High levels of direct government payments to farmers (including payments under five emergency assistance programs between October 1998 and August 2001) are also moderating demand for credit and helping to maintain farmland values. Farmers collectively received an average of $17.7 billion per year in direct payments for 1998-2002, up from $8.8 billion per year for the 1990-97 period. Many farmers have been maintaining or improving their balance sheets by avoiding new debt or by applying some of their government payments to reducing existing debt.

There are some dark clouds, however. Continued low prices for several key agricultural commodities, coupled with weather problems in some regions, may diminish the ability of less creditworthy farmers to continue securing or retaining loans, especially production credit.

Thanks to sizable government assistance, net cash income (which measures cash available from sales after paying cash operating costs) is estimated at $59.5 billion for 2001, the highest on record. But in 2002—assuming no new farm bill or additional emergency assistance—direct farm payments are projected to drop from 2001 levels and farm lenders will be dealing with a farm sector whose net cash income could decline 14 percent to $50.9 billion. In that case, the reduction in net cash income and continuing narrow margins in 2002 would force more farmers to manage relatively tight cash flows.

Farm-sector equity by the end of the year is expected to be some $7.8 billion more than in 2001. But the projected drop in net cash income—assuming no new farm bill or additional emergency assistance—would reduce farmers' credit reserves and expose a larger share of farms to potential debt repayment problems.

Growth in Nonreal-Estate Debt May Outpace Mortgage Debt

Farm nonreal-estate debt is forecast to rise marginally faster than farm mortgage debt in 2002. This differs from 2001 when farm real-estate loan balances increased 5.7 percent compared with 3.8 percent for nonreal-estate debt. The recent more rapid growth in real-estate debt, relative to loans for nonreal-estate purposes, is at least partially due to more lenders requiring farmland as collateral for nonreal-estate loans. Loans to purchase machinery and seasonal production inputs may be reported as loans secured by farmland, and are counted as farm mortgage loans.

Nonreal-estate business loans to farmers are forecast to increase about 2.4 percent in 2002 to $91.9 billion. Total planted acres for the eight principal field crops (corn, sorghum, barley, oats, wheat, rice, upland cotton, and soybeans) in 2002 are forecast to be 248.3 million acres. Even with some acreage shifts among crops, and lower input prices, total production expenses in 2002 are forecast at $200 billion, up 0.3 percent from 2001. Because of lower input prices, expenditures for seeds, fertilizer, and agricultural chemi-

As of this writing, House and Senate farm bill conferees were still working out the language of the legislation.

cals are forecast at $27 billion, down from $27.4 billion in 2001. Farm-sector fuel expenses declined from $7.2 billion in 2000 to $6.7 billion in 2001, and were expected to edge down in 2002 until the current uncertainty entered the oil market.

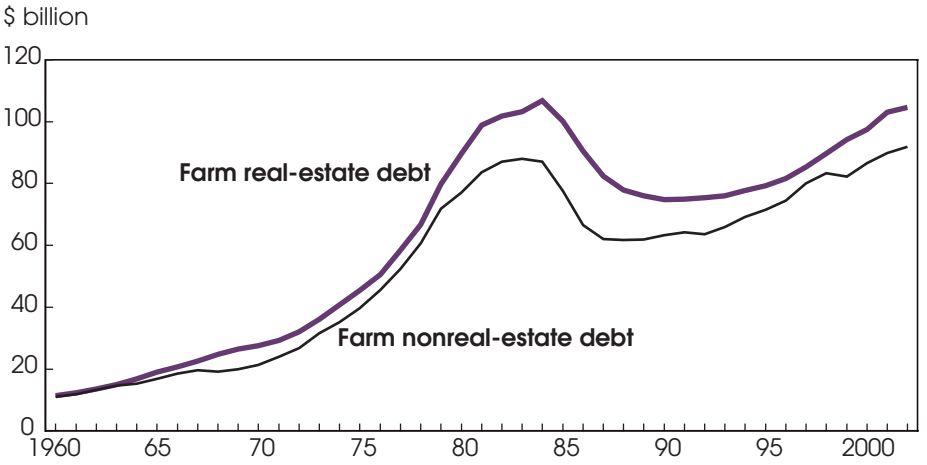
Unit sales of farm tractors, combines, and other farm machinery in 2001 were up from a year earlier, but have not recovered from the farm sector's economic slowdown that began in 1998. In 2001, sales of large two-wheel-drive tractors (100-horsepower and over) were down 29 percent, and those of four-wheel-drive tractors were down 43 percent from their highs in 1997. Sales of combines were down 38 percent from the 1998 high. For 2002, the Association of Equipment Manufacturers (AEM) projects a 3.4-percent decline for two-wheel-drive tractors, a 0.7-percent drop for four-wheel-drive tractors, and a 6-percent decrease for self-propelled combines. In contrast, AEM projects increases in 2002 for 10 of the 15 equipment categories other than tractors and combines.

On balance, sluggish sales for "big-ticket items" such as tractors and combines are likely to overshadow or at least partially offset sales strength for other machinery lines in 2002 and moderate demand for short- and intermediate-term farm loans. A larger share of big-ticket items is now financed by subsidiaries of machinery companies rather than by the more traditional institutional lenders.

Farm business interest expenses are projected to decrease about 3.4 percent in 2002 to $14.1 billion. While farm business debt is forecast to increase in 2002, interest rate reductions in 2001 by the Federal Reserve suggest interest rates on farm credit—because of a lag—will average lower in 2002, particularly for shorter term loans.

Farm real-estate loans are forecast to increase 1.5 percent to $104.6 billion in 2002. Mortgage loan volume is generally affected by changes in farmland values. Total U.S. farmland value, as reported in USDA's farm-sector balance sheet, increased an estimated 3 percent in 2001 and is expected to advance about 1.2 percent in 2002. This would be the 16th consecutive annual increase since 1987, though the recent rate of increase has slowed. The outlook for 2002 could be tempered if new farm legislation does not provide additional direct payments to bring total farm spending more in line with recent years.

Farm Real-Estate Debt Continues to Trend Upward



2001 preliminary; 2002 forecast.

Economic Research Service, USDA

While recent farmland value growth rates are down, they have been buoyed in many areas by direct government payments, off-farm employment, and urban sprawl (expansion of urban areas and large-lot development in rural areas). During 1992-2000, the yearly gains, averaging 5.6 percent, were the highest since values began to recover in 1987.

Recent gains in farmland value may not have led to corresponding increases in demand for farm mortgage credit. A significant portion of the price gain may have been driven by urban sprawl and nonfarm investors rather than by farmers. Moreover, many of the farmer buyers reportedly were able to pay wholly or in large part with cash and not via borrowing. For many midsize to smaller farms, strong off-farm earnings in recent years have allowed operators to bid higher on farmland tracts than agricultural-use values would indicate.

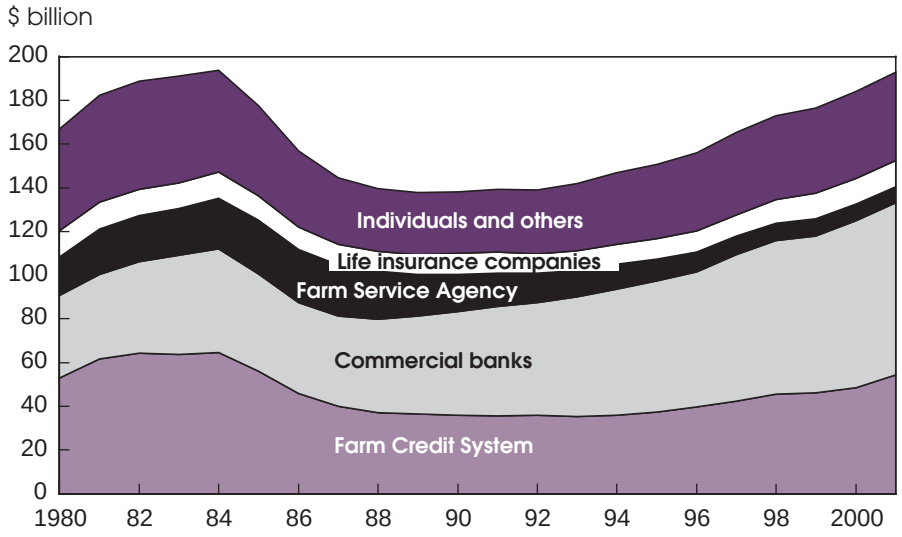
Will the Credit Supply Be Adequate?

The financial position of commercial agricultural lenders in 2002 is generally healthy. Farm lending institutions continue to build capital and maintain favorable credit quality levels in their loan portfolios. All major lender categories continue to experience low levels of delinquencies, foreclosures, loan chargeoffs, and loan restructuring. Farm financial stress, unless sustained, should not significantly affect aggregate loan delinquency rates or other farm lender indicators. The duration of relative price weakness for several major farm commodities is unknown, but the data indicate no significant problems in national lender performance to date.

The four traditional categories of institutional farm lenders, in order of overall farm credit volume, are ***commercial banks***, the ***Farm Credit System*** or ***FCS*** (a collection of federally-chartered, borrower-owned credit cooperatives that lend primarily to agriculture), ***life insurance companies***, and USDA's ***Farm Service Agency*** or ***FSA*** (the government "farm lender of last resort"). Together, these four classes of lenders accounted for 79 percent of all farm loans outstanding in 2001. The remaining share of farm credit comes from individuals and from nontraditional lenders, primarily input and machinery suppliers, cooperatives, and processors.

Agricultural Economy

Total Farm Business Debt Has Risen Since 1989, with Commercial Banks Holding an Increasing Share



2001 preliminary.

Economic Research Service, USDA

In 2001, total farm business debt grew 4.8 percent, and outstanding loan volume increased for all farm lenders except FSA. FCS, second to commercial banks and having the fastest growth in loan volume, accounted for two thirds of the growth in total debt last year. Outstanding farm business loans at the FCS grew 12.1 percent to $54.4 billion, followed by commercial banks (2.9-percent growth to $78.6 billion) and life insurance companies (1.5-percent growth to $12 billion). In contrast, FSA's total farm business direct loans outstanding decreased 2.5 percent in 2001 to $7.3 billion.

Availability of funds is not a major concern for creditworthy borrowers since most lenders have access to more money than they can profitably lend. Farm loan interest rates in 2002, while expected to increase moderately during the year, should remain low by historical standards, and this will help farmers carry debt. As always, agricultural lenders will closely examine the profit margin of farmers' operations when making loan decisions. Borrowers who cannot show repayment ability even with the substantial government assistance of recent years may have to curtail operations, restructure, or exit farming.

Commercial banks show a recent growth in farm loan demand in agricultural areas as reflected in their loan-to-deposit ratios. In the past, the liquidity position of these agricultural banks was closely watched because of their dominant role in providing farm loans. Average loan-to-deposit ratios for agricultural banks were 76.5 at the end of the third quarter of 2001 (latest available data). They appear to have reached a plateau since mid-2000 when they stood at 76 percent compared with 72 at the beginning of the year. Ten years earlier, the ratio was 56 percent.

In the past, high loan-to-deposit ratios might have constrained new loan originations, but commercial banks now have nondeposit sources of funds such as the Federal Home Loan Bank System, and may sell farm mortgage loans to Farmer Mac. The recent jump in loan-to-deposit ratios may indicate greater reliance on these funding sources, plus sluggish growth in deposits. Profitable, well-managed agricultural banks often have very high loan-to-deposit ratios. Although banks in rural areas make considerably less use of nondeposit funds than metropolitan banks, most still use these funds to some extent.

Overall, adequate funds are available from banks for agricultural loans, with few banks reporting a shortage of loanable funds. Commercial bank farm loans are projected to increase 2.3 percent in 2002, compared with 2.9 percent in 2001.

The **Farm Credit System (FCS)** is in excellent financial condition and well positioned to supply farmers' credit needs in 2002. In recent years, the FCS has undergone massive restructuring of its organization and procedures. FCS has gained farm loan market share in 6 of the past 7 years after a gradual loss in 9 of the 10 previous years. Government backing allows the FCS to access national money markets and provide credit at very competitive rates.

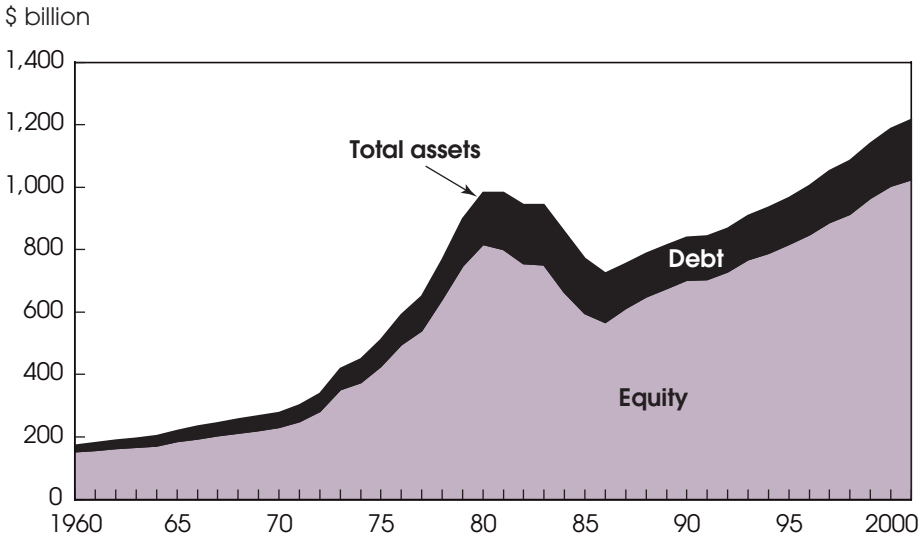
In 2002, FCS farm business debt is forecast to increase 2.1 percent following a 12.1-percent rise in 2001. The mortgage debt portion is expected to increase about 1.6 percent in 2002, and the nonreal estate portion about 3 percent.

Farm Service Agency (FSA) loans serve farmers unable to obtain credit elsewhere. Based on loan activity from the first 6 months of fiscal year 2002, FSA should have sufficient lending authority to meet most program demand during the balance of the year. Lending authority of $4.4 billion was available at the start of the fiscal year, compared with $3.3 billion in actual lending during fiscal 2001. For fiscal 2003, the President's budget calls for $3.7 billion in lending authority. FSA can also provide emergency credit after the occurrence of natural disasters.

Life insurance companies report adequate funds for loans that meet their quality standards. Farm lending activity by life insurance companies is forecast up 1.6 percent in 2002, compared with a 1.5-percent increase in 2001. Since 1992, life insurance industry holdings of farm mortgages have increased each year for a total gain of 36.7 percent.

In the coming months, lenders will likely remain cautious in extending agricultural credit, due largely to uncertainty about farm commodity prices and the level of government payments. Lenders were able to manage most farm loan repayment problems last year, given relatively

Farmers' Equity Has Been Above Previous High Since 1997



2001 preliminary.
Economic Research Service, USDA

healthy recent farm incomes bolstered by the additional Federal financial assistance.

Any deterioration in lenders' portfolios due to the 2002 farm financial situation is likely to be manageable. But, if low commodity prices persist and Federal assistance to farmers declines, lenders would increasingly face renewal requests for substandard loans and see a deterioration in customer creditworthiness. In this scenario, some farmers would need to reconsider and reformulate their plans to use additional loans to finance operations.

Today, despite relatively low prices, lenders appear confident about the bulk of their farm customers, given the level of Federal financial assistance provided to farmers. Although farm debt has risen in recent years, most farmers are not as heavily leveraged as a decade ago. Veteran lenders cite significant differences from the 1980s, including lower interest rates, more owner equity, better credit analysis and monitoring methods, strong off-farm incomes, and improved management ability of their producer customers. AO

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Demand for farm credit and the farm lender situation are discussed further in the latest issue of *Agricultural Income and Finance* at www.ers.usda.gov/publications/so/view.asp?f=economics/ais-bb/

Factors affecting farmland values are discussed in *Agricultural Outlook* October 2000 and August and November 2001, at www.ers.usda/publications/AgOutlook/Archives/

May Releases—National Agricultural Statistics Service

The following reports are issued electronically at 3 p.m. (ET) unless otherwise indicated.
www.ers.usda.gov/nass/pubs/pubs.htm

May

1 Crop Progress (4 p.m.)
2 Weather - Crop Summary (noon)
3 Broiler Hatchery
Egg Products
5 Dairy Products Prices (8:30 a.m.)
Dairy Products
Poultry Slaughter
Poultry Slaughter - Annual
Vegetables
8 Crop Progress (4 p.m.)
9 Weather - Crop Summary (noon)
10 Crop Production (8:30 p.m)
Broiler Hatchery
12 Dairy Products Prices (8:30 a.m.)
Milkfat Prices (8:30 a.m.)
Turkey Hatchery
15 Potato Stocks
Crop Progress (4 p.m.)
16 Weather - Crop Summary (noon)
17 Broiler Hatchery
Milk Production
18 Hatchery Production - Annual
19 Dairy Products Prices (8:30 a.m.)
Cattle on Feed
Cold Storage
Livestock Slaughter
22 Catfish Processing
Crop Progress (4 p.m.)
23 Weather - Crop Summary (noon)
Chickens and Eggs
Monthly Agnews
24 Broiler Hatchery
25 Dairy Products - Annual
Floriculture Crops
Milk - PDI
26 Dairy Products Prices (8:30 a.m.)
Milkfat Prices (8:30 a.m.)
Meat Animals - PDI
Monthly Hogs and Pigs
Peanut Stocks and Processing
29 Poultry - Production and Value
Crop Progress (4 p.m.)
30 Weather - Crop Summary (noon)
Agricultural Prices

Interest Rates on Farm Loans to Increase During 2002-03

Borrowers, including farm borrowers, are likely to encounter rising interest rates in 2002 and 2003 after enjoying declining rates since mid-2000. The upward pressure comes from the unexpectedly strong pace of the economic rebound that began in late 2001. Because agricultural credit is only a small proportion (0.7 percent in 2001) of total credit, interest rates on agricultural loans are determined primarily by factors outside agriculture in national and international credit markets. Changes in demand for credit on the part of consumers, nonfarm business, and government, as well as the supply of credit funds from consumers and depository institutions, all strongly influence interest rates on farm loans.

Interest rates are determined in credit markets by the collective actions of credit suppliers and users. Credit markets determine interest rates and risk premiums on debt that balance the overall supply and demand for credit. Interest rates are composed of a real return (in terms of purchasing power of real goods and services) and an inflationary expectations return (to compensate lenders for changes in a dollar's purchasing power over time). The real rate of interest represents a return to the lender for forgoing current consumption of goods and services in exchange for the opportunity to consume more goods and services in the future.

An increase in inflationary expectations will cause nominal interest rates to rise as lenders demand higher interest rates in order to maintain purchasing power. Interest rates will vary among borrowers depending upon borrower characteristics (such as default risk), loan characteristics (including liquidity, collateral quality, and loan size), and lender's risk aversion.

Interest Rates Moved Sharply Lower in 2001

Between mid-2000 and the end of 2001, nominal and real interest rates fell sharply as economic growth slowed, then turned negative in the third quarter of 2001. Interest rates on nonreal-estate farm loans from commercial banks, for example, fell from 10.2 percent to 6.2 percent. The two most important macroeconomic factors behind the fall were an aggressive easing of U.S. monetary policy by the Federal Reserve Board in 2001 and much lower credit demand by business. Other contributing factors were a rise in the consumer savings rate in the second half of 2001, strong foreign demand for U.S. securities, a loosening of foreign monetary policies, and a moderate fall in year-ahead inflationary expectations in late 2001. Most of the fall in actual interest rates was in the real (inflationary expectations adjusted) component.

Beginning in January 2001, the Federal Reserve Board eased monetary policy by lowering its Federal funds interest rate target (the interest rate on deposits held at Federal Reserve banks primarily by depository institutions) by 4.75 percentage points in 11 separate moves ending in December. This reduced other interest rates by lowering the expected level of the Federal funds rate for 2001 and 2002 and encouraging a more rapid expansion in the supply of money and credit by depository institutions.

Overall private credit demand grew at a 2-percent slower pace in 2001 relative to 2000, led by 3.8-percent slower growth in outstanding credit of nonfinancial business firms. Credit demanded by business dropped because of falling real business fixed investment spending and reduced business inventories. Falling business fixed investment reflected lower capacity utilization rates (which lowered the productivity of the existing capital stock), falling profits, tighter credit standards, and much weaker equity markets. Businesses reduced inventories by $62 billion in 2001 in response to weaker final sales and falling corporate profits.

Stronger Economic Growth to Pressure Interest Rates

Interest rates are likely to be under increasing upward pressure in 2002 and 2003, although inflation and inflationary expectations are expected to remain low. The upward pressure will come from stronger business credit demand, expected tighter domestic monetary policy, and gradually accelerating economic growth. Real interest rates may rise more sharply in 2003 if business fixed investment spending accelerates, world economic growth picks up sharply, or the Federal Reserve aggressively raises Federal funds rates. Increases in farm interest rates will be tempered by sluggishness in the adjustment of farm interest rates to changes in open market interest rates.

Economic growth was unexpectedly positive in late 2001, led by very strong growth in consumer and government spending. The recovery picked up steam in early 2002, led by robust growth in residential construction, an unexpected upturn in manufacturing output, and a moderate rise in consumer spending. With the U.S. economy clearly growing at least at a moderate pace in early 2002, credit market participants grew increasingly concerned that the recovery would lead to robust growth in credit demand and much tighter monetary policy by the Federal Reserve. Because debt markets are forward looking, interest rates rose significantly in response to these concerns.

Over the October 2001-March 2002 period, 1-year and 10-year Treasury bonds rose approximately 0.3 and 0.8 percentage points, respectively. Rising money market yields caused bond investors to demand higher risk premiums to hold long-term bonds, further boosting bond rates. The

rise in Treasury interest rates has put upward pressure on private lending rates in general, including farm interest rates. In 2002, if U.S economic growth is moderate, inflation remains low, and Federal Reserve tightening is not severe, further increases in bond market interest rates during the balance of the year could be relatively mild.

Economic growth in 2002 will get a substantial boost from business efforts to rebuild inventories. In 2001, inventories fell approximately $62 billion, lowering real GDP growth by approximately 1.5 percent. Rising inventory levels will raise short-term credit demand. Moreover, with concerns over business accounting standards expected to continue, large firms will continue to have difficulty raising funds in the commercial paper market and will be more dependent on commercial banks for their short-term credit needs.

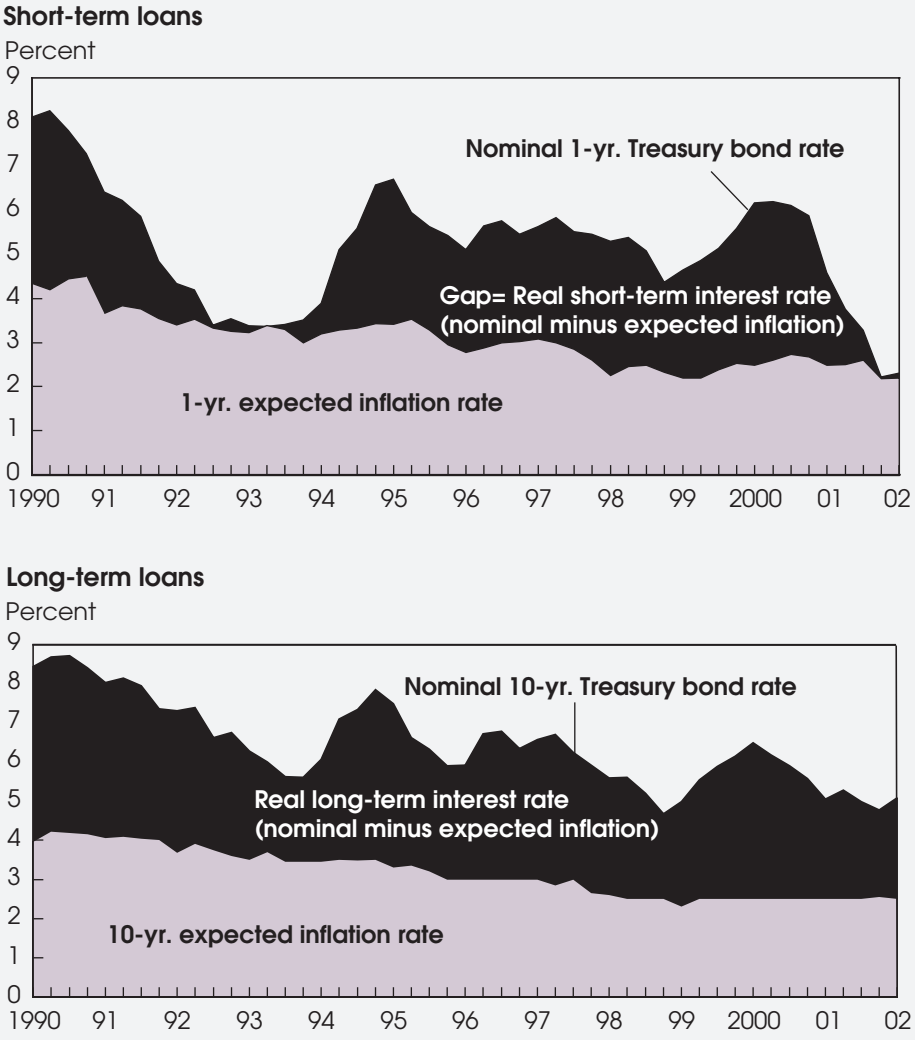
Economic growth in 2002 is likely to be moderate, tempered by a lack of pent-up demand on the part of consumers and homebuyers. Typically in recessions, with increased employment uncertainty, consumer purchases of durables and homes falls. But in 2001, purchases of consumer durables and residential housing rose 6.7 and 1.5 percent, respectively. Business investment in plant and equipment, which fell 3.2 percent in 2001, is expected to turn positive by the second quarter of 2002 and gradually pick up pace in the second half of 2002 and in 2003. Business spending will be constrained by current excess capacity and poor profitability in many industries.

Stronger economic growth in general will raise the demand for credit and money to support higher levels of economic activity. In 2002 and 2003, the combination of stronger short- and long-term business credit demand, coupled with expected tighter domestic monetary policy and more rapid domestic and foreign growth, will place upward pressure on real interest rates.

As excess capacity is reduced over the course of the recovery and business profit margins slowly improve, real returns to the existing business capital stock will increase. Higher returns to existing capital stock will raise expected real returns to business investment in plant and equipment and place upward pressure on real interest rates. Also, expected tighter monetary policy in the second half of 2002 and in 2003 will place upward pressure on real short-term interest rates and, to a lesser extent, real long-term interest rates

Inflation should remain low in 2002. Declines in producer prices in the second half of 2001 were broad-based, extending well beyond energy and food prices. In addition, growth in employment costs—as measured by the employment cost index—slowed in the second half of 2001. Given excess capacity in most industries, and the very strong dollar, business profit margins will continue to be squeezed in the first half of 2002. Therefore, little inflationary pressure from rising costs exists in the economy outside the volatile energy area. Low inflation in the first half of 2002 and expected continued strong productivity growth should keep short-term inflationary expectations low for the

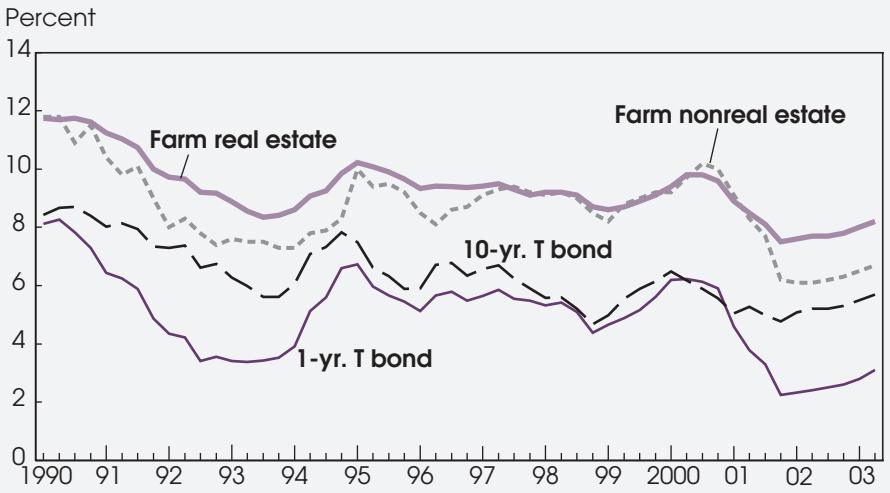
Short- and Long-Term Interest Rates Bottomed Out in Late 2001



2001 preliminary. 2002 forecast. Inflation rates based on consumer price index and Survey of Profesional Forecasters.
Sources: Federal Reserve Board of Governors and Federal Reserve Bank of Philadelphia.
Economic Research Service, USDA

Agricultural Economy

Interest Rates on Farm Loans Likely to Increase in 2002-03, Reflecting Movement in Treasury Bonds



2001 preliminary; 2002-03 forecast. Based on monthly data from Federal Reserve Board of Governors.
Economic Research Service, USDA

remainder of 2002 and 2003. Inflation is likely to pick up mildly in 2003 in response to tighter labor and capital markets coupled with stronger economic growth abroad.

Farm Interest Rates Should Trail Interest Rates in General

While interest rates are likely to rise in 2002 and 2003, farm loan rates are expected to increase less than most interest rates. Typically, interest rates on farm loans at commercial banks are less volatile than most nonfarm interest rates and adjust more slowly. However in the long term, interest rates charged on farm loans by lenders must earn competitive risk-adjusted returns that are comparable to risk-adjusted returns from nonfarm loans and other financial assets.

Banks in rural areas are heavily dependent on consumer deposits (checking and savings accounts, plus time deposits of less than $100,000) for the bulk of their loan funds. Rates paid on consumer deposits typically lag changes in open-market interest rates. In addition, changes in deposit interest rates typically affect loan rates at rural banks relatively slowly. Banks prefer to keep their small business loan rates more stable by determining their loan fund costs on an average cost-of-funds basis. This helps stabilize interest rate margins between the expected return from lending and the average interest rate paid to depositors.

The relative stability of farm loan interest rates charged by commercial banks has been enhanced in recent years by the lack of large fluctuations in farm loan delinquency rates. In 2000 and 2001, agricultural loan performance held up well in relation to nonagricultural business loans. Loan delinquency rates for agriculture have been relatively stable since 1998, while delinquency rates for nonreal-estate business loans have moved upward during this period, especially during the economic slowdown and recession of 2000 and 2001. Given the Federal government's commitment to supporting farm income and the likelihood of some overall improvement in export market conditions for U.S. agricultural products in 2002, agricultural loan delinquency rates are not expected to rise sharply over the next year. AO

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FOR MORE INFORMATION

Real-estate and nonreal-estate farm loan rates are reported in the Agricultural Finance Data Book, published quarterly by the Board of Governors, Federal Reserve System, Washington, DC.

Forecasts for key real, inflation, and financial variables are published quarterly by the Federal Reserve Bank of Philadelphia in the Survey of Professional Forecasters. www.phil.frb.org/econ/spf/index.html

Macroeconomic Factors Behind the Fall in Farm Interest Rates
ERS Outlook No. AIS 78-01, March 2002. www.ers.usda.gov/publications/ais78/

Specialty Crops

Increased Fall Potato Acreage Expected

Key factors such as significantly higher grower prices and relatively low stocks on hand this spring point to an increase in potato acreage for fall harvest this year. However, several other factors such as uncertain processor demand, potential for increased Canadian production/competition, and acreage intentions for several alternative crops put the extent of the increase in potato acreage in question. Based on overall market conditions, planted acreage is forecast to increase by 4 to 7 percent.

Last fall, U.S. growers harvested 401 million hundredweight (cwt) of potatoes, 14 percent below the record crop of the fall of 2000. This large decline in production, the combination of decreased acreage and lower yields, has pushed stocks of fresh potatoes well below previous year levels throughout the marketing season. On March 1, 2002, fresh stocks were 15 percent below year-previous levels and 1 percent below 2000. Adding pressure to the reduced supply situation are the effects of a significant drop in Canadian production last fall (down 12 percent from the previous year to 89 million cwt), which put Canadian stocks down 19 percent from a year earlier on March 1.

The smaller supply of potatoes in North America has subsequently led to higher prices for U.S growers this marketing season. Monthly grower prices for all potatoes have averaged 38 percent higher than a year ago for the September through February period. This is due largely to significantly higher prices for fresh-market potatoes, which are up 117 percent from prior year levels (September through January). About 30 percent of potato sales are for fresh-market use. Prices for processing potatoes are also up, but only slightly (5 percent for September through January) as they are held in check by contracts between growers and processors that are made prior to the growing season.

As a result of lower production and higher prices, use of potatoes by processors this season is down 13 percent from a year ago, and is at the lowest level since the 1993/94 marketing year. However, despite producing fewer frozen potato products, processors have managed to keep frozen stocks near previous level into early spring. At the beginning of March, stocks of all frozen potato products were 1 percent above a year ago—stocks of fries were up 3 percent while all other frozen potato products were down 7 percent.

Significantly lower usage by processors combined with smaller changes in frozen stocks is probably a reflection of somewhat lower demand for frozen potato products in the last 4 months of 2001, the result of a slowed general economy and lower foodservice demand. U.S. exports of frozen french fries also showed signs of reduced output and demand during the September to December 2001 period, as they were off 8 percent compared to the same period in 2000. As the remainder of the marketing season continues, however, foodservice demand for processed potato products may increase as the economy recovers. With supplies of raw potatoes even tighter in Canada than in the U.S., processors may increase open market purchases of U.S. potatoes this spring and summer.

The uncertainly in the processing sector this year has continued into the time for drawing up new contracts between growers and processors this spring. Contract negotiations have been slow to develop in every growing region in North America this year (as of the beginning of April, only growers in Washington state had signed contracts with frozen processors) and many growers are delaying plantings until contracts are in hand. What effect this will have on overall plantings this spring is hard to tell, but if several areas get off to a later start than usual it could mean early season harvest (late July through mid-September) will be atypically small. With current supplies of potatoes likely to run out earlier than usual, a late start to this fall's harvest could create a supply gap in late summer and early fall.

In addition to stalled contract negotiations, potential competition for acreage by alternative crops in several regions is possibly cutting into the size of the expected acreage expansion this year. The crop with the most potential impact on potatoes this year seems to be dry beans. Prospective planted area of dry beans in the U.S. is expected to be up 24 percent this year, with 17, 36, and 43 percent increases anticipated in major potato-producing states of Colorado, North Dakota, and Minnesota respectively. Also, increases in sugar beet acreage, up 3 percent nationally (up 7 percent in Idaho and 15 percent in Colorado), could limit the increase in potatoes in certain areas. However, the overall acreage impacts these crops have on potatoes may not be significant.

At least one significant potato-growing region is going to have a large increase in potato acres this year compared to last. The Klamath Basin of Oregon and California, which was prevented from producing at full capacity last year due to water supply issues, will be back in business and alone should add 1 percent to the U.S. fall acreage total. Last year the region realized an 80 percent drop in acreage due to drought and the Federal shut down of irrigation water to protect endangered fish. On February 27, the Fed-

The U.S. fall potato crop accounts for about 90 percent of total U.S. annual production (all growing seasons combined). Harvest usually starts in September or October depending on the growing region and weather conditions, and is completed by October or November. The marketing season for fall potatoes is September through August of the following year, with most spuds sold from storage during October through July. In recent years, Western states have accounted for about 69 percent of the U.S. fall crop, Central states about 25 percent, and Eastern states about 6 percent. Idaho and Washington together account for about 55 percent of the U.S. fall crop, and the crops in each of these states individually is typically larger than the entire Canadian crop.

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eral Bureau of Reclamation announced that the region will have irrigation water access and early snow pack estimates indicate an adequate supply. Most of the 10-15,000 acres of potatoes that were not planted last year are expected to return to production this fall.

Based on these overall market conditions, total U.S. potato acreage planted for fall harvest is expected to increase 40-80,000 acres from a year ago. Excellent prices and relatively low stocks of potatoes from the previous fall crop are likely to drive the increase, although mitigated somewhat by various other factors. If realized, acreage increases in the forecast range combined with average acreage abandonment and yields would put fall production between 419-431 million cwt (up 5-8 percent from fall 2001). Increased acreage with yields similar to record levels achieved in 2000 could put fall production up 10-14 percent from a year ago (between 444 and 457 million cwt). USDA's first official estimate of planted acreage for fall potatoes will be released in July, and should provide a clearer indication of production and prices in the coming year. AO

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Commodity Spotlight

USDA photo: Larry Rana

Soybean & Cotton Plantings To Decline in Favor of Corn In 2002

For the eight major U.S. field crops (corn, soybeans, wheat, cotton, sorghum, barley, oats, and rice), planting intentions for the 2002 crop year are pegged at 248.3 million acres. While acreage is down more than 3 million acres from last year's intentions, it is nearly identical to last year's actual planted acreage, despite widespread weak price signals this spring. Planting intentions for 2002 are 8.6 million acres below the most recent peak in planting intentions in 1996.

Leading this year's change in crop mix is a surge in corn planting intentions. Intended corn plantings are up in part because (natural gas-based) fertilizer costs are down compared with last year. Also contributing to expanded corn planting intentions this year are changes in relative commodity prices and non-price factors, such as crop rotation considerations and disappointment with soybean yields in recent years. In all, farmers intend to expand planted corn acreage by about 4 percent from 2001, to 79 million acres. Soybean plantings are expected to be down 1.1 million acres to 73 million, and wheat plantings will continue their downward trend, with intentions 0.6 million acres off last year's 59.6 million planted acres. Intended cotton plantings, at 14.8 million acres, show a 6.3-percent decline.

Compared with last year, corn and spring wheat price expectations—based on futures contract prices—are down 5 percent and 1 percent, respectively. Winter wheat prices dropped 12 percent and cotton prices by 19 percent. In contrast, soybean prices rose 7 percent. With commodity price expectations remaining below farm program loan rates for some crops, marketing loan benefits—marketing loan gains or loan deficiency payments (LDPs)—will continue to be an important determinant of planting decisions, particularly for soybeans and cotton. Although commodity program loan rates had not been announced at the time USDA's planting intentions survey was taken in early March, many U.S. farmers are likely to have assumed that loan rates will remain unchanged for the 2002 crop year.

Trend yields, along with planting intentions, suggest a larger U.S. corn crop and a slightly smaller soybean crop than last year's. Even with slightly lower expected wheat acreage, production prospects point to a larger crop than last year due to lower projected abandonment (unharvested acres). Overall yields could also rebound from last year, in part because most of the decline in "all wheat" acreage this year is expected to be from generally lower yielding spring wheat. A smaller cotton crop is anticipated as cotton acreage is being bid away to more profitable competing crops.

Corn. Corn growers intend to plant 79 million acres in 2002, up more than 4 percent from last year's planted acreage but still well below the record 84.1 million acres in 1981. Many producers in the Midwest probably anticipated more attractive net returns for corn than for soybeans. This year's increase is due largely to lower per acre costs of fertilizer and fuel for corn production than last year, and a switch from cotton acres in the Delta as cotton's producer incentive prices (PIP)—market price plus benefits from LDPs and marketing loan gains—declined. Also important are crop rotation considerations, uncertainty about new farm bill provisions and the potential for lower soybean loan rates, and plantings on land that farmers intended to put in corn last year but could not plant due to adverse weather conditions.

The prospective expansion of corn plantings in the Corn Belt this year outpaces the rise in the Central and Northern Plains. Intended corn plantings in the Corn Belt are up 1.6 million acres, with the increase spread throughout the entire region. Iowa and Illinois lead the increase

Planting intentions for 2002 are compared with actual plantings in 2001 unless otherwise stated. Price expectations are based on year-to-year changes in new-crop futures price quotes for harvest-time delivery in mid-March for spring crops and mid-October for winter wheat (when planting decisions are made). For wheat, futures prices are from the Kansas City Board of Trade for hard red winter wheat and the Chicago Board of Trade for soft red winter wheat. Spring crop producers may have indicated their planting intentions based on early-March futures prices. For soybean producers this year, new-crop futures prices are less relevant than the per-unit revenue floor available from marketing loan benefits.

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with 0.3 million acres each, followed by Minnesota, Indiana, Wisconsin, and Ohio. Intended corn acreage in the Central and Northern Plains region is up a total of 0.6 million acres, most notably in North Dakota, Nebraska, and South Dakota. The potential 0.3-million-acre expansion of corn plantings in North Dakota may reflect a shift from other spring wheat (spring wheat, excluding durum), which shows a decline of 0.7 million acres in that state.

Intended corn acreage is also up throughout most of the South (the Delta, Southeast, and Southern Plains regions), with Texas and Louisiana leading the increase with 0.3 million acres each. In all, intended corn plantings are up 1.1 million acres in this region. In Texas, relatively large declines in sorghum and cotton planting intentions suggest that expanded corn area may come from land previously planted to these crops. A considerable reduction in cotton acres in the Delta region reflects lower expected per-unit returns for cotton this year.

Planned adoption of biotech varieties accounts for about 32 percent of intended corn plantings this year, up from 26 percent last year. Plantings of insect-resistant (Bt) corn varieties, including stacked-gene varieties (which have both Bt and herbicide-tolerant traits), are expected to reach 24 percent of all corn acres, up from 19 percent last year.

Soybeans. Intended soybean plantings for 2002 total 73 million acres—1.5 percent below last year's planted acreage and a 2-percent decline from record plantings in 2000. This year's intentions, if realized, would be the second consecutive year of declining soybean acreage, a slight reversal from the continuous expansion of soybean acreage since 1990.

Crop rotation considerations favor more corn plantings at the expense of soybeans in the Midwest this year, but marketing loan benefits also play a role in farmers' planting decisions for soybeans. If not for the prospect of a continuation of relatively high marketing loan benefits for soybeans, U.S. soybean intended plantings may have declined even further. Marketing loan provisions have made soybean production attractive to many producers because the potential for marketing loan gains (repayment of government loans below the loan rate) and LDPs can provide soybeans a higher net return than competing commodities when market prices of these crops fall below commodity loan rates.

These estimates are based on farmer surveys conducted by USDA's National Agricultural Statistics Service during the first 2 weeks of March. USDA's *Prospective Plantings* report for 2002, released March 28, provides this year's first (USDA survey-based) indication of farmers' spring planting intentions for major field crops. Weather or price changes could alter planting decisions. USDA will release acreage estimates in its June 30 *Acreage* report, after crops have been planted or when planting intentions are more definite. The March *Prospective Plantings* report is available at http://usda.mannlib.cornell.edu/ and the June *Acreage* report will be available at http://usda.mannlib.cornell.edu/reports/nassr/field/pcp-bba/

The decline in intended soybean plantings this year is concentrated in the Corn Belt. Soybean plantings in this region are expected to contract by 1.1 million acres, spread fairly evenly among key producing states (Iowa, Illinois, Indiana, Missouri, and Ohio). In the Central and Northern Plains, soybean plantings may remain unchanged this year.

A notable exception to this year's soybean picture is North Dakota, where soybean plantings could rise almost 0.5 million acres—more than 20 percent—reflecting the switch from other spring wheat, which is expected to yield lower net returns. However, soybean plantings are expected to decline in other wheat-dominated states in the Central and Northern Plains, a deviation from the trend towards expanded soybean production in this region.

Similarly, intended soybean plantings remain virtually unchanged from last year in the Delta and Southeast. Farmers intended to expand soybean plantings in a few states—especially Mississippi, Texas, Georgia, and Alabama—but these gains may be offset by decreases in Oklahoma, Kentucky, and North Carolina.

Although overall soybean planting intentions have decreased, herbicide-tolerant soybeans appear to have become even more popular with U.S. farmers. The expected adoption rate for biotech soybeans reached 74 percent, up from 68 percent last year.

Other feed grains. Among "other feed grains," sorghum planting intentions dropped 13 percent from last year's plantings to 9 million acres, whereas intended oats plantings surged 16 percent to 5.1 million acres. Intended barley plantings are up slightly, to 5.1 million acres from last year's 5 million.

Intended sorghum plantings are down in key producing states, led by a 0.8-million acre drop in Texas, the second-largest sorghum producer behind Kansas. Intended sorghum plantings are down this year in part because of the faster pace of winter wheat seedings last fall than the previous year and lower projected abandonment of winter wheat acreage—land that alternatively may have been planted to sorghum. For example, sorghum plantings in Kansas last year were up 0.5 million acres from 2000 mainly because adverse weather prevented winter wheat seedings. In fact, although this year's sorghum planting intentions in Kansas are down from last year's actual plantings, they are up 0.2 million acres from last year's intentions of 3.6 million acres. Higher yields for corn in recent years have also enticed producers to switch from sorghum to corn this year.

Among the major field crops, intended oats plantings show the largest percentage increase from last year. Intended acreage is up 16 percent, with most of the increase coming from Texas, North Dakota, Wisconsin, South Dakota, California, Kansas, and Minnesota. Oats plantings in other states are expected to be fairly steady. An expected farm price more than 50 percent above last year, reflecting a shortage of food-grade oats, enticed U.S. farmers to expand their planting intentions. Important suppliers to the U.S. market—Canada, Sweden, and Finland—experienced production problems last year. Canadian oats production was down by nearly

20 percent and the quality of oats in these countries was poor.

Intended barley plantings are up 2 percent from last year's plantings. Expected plantings remain unchanged at 1.5 million acres in North Dakota, the leading barley producer. The bulk of the increase is in Montana, as barley plantings have shifted from east to west to avoid plant diseases. Producers in some states (California and Washington) may be switching much of the cropland previously planted to barley to more profitable competing crops.

Wheat. Wheat area intentions for 2002 total 59 million acres, a 1-percent decline from last year's planted area, mostly reflecting decreases in durum and other spring wheat plantings. USDA's *Winter Wheat Seedings* report in January indicated that farmers had planted 41 million acres of winter wheat for harvest in 2002, down 0.1 percent from last year and the lowest since 1971. The March planting intentions survey—which updates actual winter wheat seedings—put the level of winter wheat plantings at 41.1 million acres.

The expected price of winter wheat facing producers at planting time last fall was 12 percent below a year earlier based on new-crop futures prices for harvest-time contracts. But potential marketing loan benefits anticipated by producers, particularly for soft red winter (SRW) wheat, limited the decline in the PIP. Lower anticipated PIPs for cotton also upheld winter wheat plantings in the South.

Acres seeded to winter wheat in Texas, Oklahoma, and Montana showed significant increases over last year, more than offsetting a 4-percent drop to 9.4 million acres in Kansas. Winter wheat seedings in Kansas have been declining since 1996 and are now at the lowest level since 1957, reflecting a long-term expansion of corn and soybean acreage in this wheat-dominated state. Winter wheat seedings in the Southern Plains rebounded 9 percent, mostly in Texas, from last year's lower levels. Seedings were down last year due to poor planting conditions—seeding progress was hindered by early dryness followed by excessive rainfall. Most of the 0.8-million-acre gains in Texas this year were likely originally intended for grazing and hay, not for grain.

Planting Intentions for Major Field Crops Are Nearly Identical To Last Year's Plantings

Crop	2001 Intended	2001 Planted	2001 Harvested	2002 intended
		Million acres		
Corn	76.7	75.8	68.8	79.0
Soybeans	76.7	74.1	73.0	73.0
Wheat	60.3	59.6	48.7	59.0
Sorghum	9.4	10.3	8.6	9.0
Barley	5.3	5.0	4.3	5.1
Oats	4.4	4.4	1.9	5.1
Rice	3.1	3.3	3.3	3.3
Cotton	15.6	15.8	13.8	14.8
Total	251.5	248.2	222.4	248.3

Totals may not add due to rounding.
Source: National Agricultural Statistics Service, USDA.
Economic Research Service, USDA

SRW wheat area is down 4 percent from last year and 13 percent from 2 years ago. Underlying the decline are a 4-percent reduction in the expected farm price for SRW from the previous year and wet conditions across the eastern Corn Belt last fall that hampered plantings. Acreage fell across the Corn Belt and much of the Southeast.

In 2002, U.S. farmers intend to plant about 17.9 million acres of spring wheat (durum and other spring wheat), down 3 percent from last year. Behind the slight decline are a 6-percent drop in the expected price for hard red spring wheat from last year and disease problems. In North Dakota, the leading spring wheat producing state, planting intentions for other spring wheat are down nearly 10 percent, due most likely to higher expected net returns for soybeans, corn, and other oilseeds.

Similar to the intentions for other spring wheat plantings, durum wheat showed a 2-percent decline from last year, mostly in North Dakota. One reason for the decline is the removal of incentives provided by the durum Crop Revenue Coverage program, which was cancelled last year due to administrative difficulties. In addition, concerns about scab problems—which ravaged the durum crop across a wide area last year—further dampened incentives. Most of the cropland not planted to durum wheat will likely be switched to corn, oilseeds (soybeans, flaxseed, or canola), or oats.

Cotton. Planting intentions for cotton in 2002 total 14.8 million acres, a decline of more than 6 percent from last year's planted acreage. With this spring's (mid-March) expected PIP for cotton—which includes expected marketing loan benefits—down by about 11 percent from a year earlier, cotton acreage is being bid away to more profitable competing crops. Cotton growers are still eligible to purchase higher coverage levels of crop insurance at the lower premium provided under the Agricultural Risk Protection Act of 2000, but the price guarantee under this program is considerably lower this year. Uncertainty about the outcome of the farm bill, especially with respect to payment limitations, may also be a factor contributing to the decline in cotton planting intentions.

The anticipated drop in total cotton area in 2002 is unevenly distributed among the leading cotton-producing states. In Texas, cotton plantings are down about 0.3 million acres (a decline of 5 percent). Cotton plantings in the Delta region (Mississippi, Louisiana, and Arkansas) are down 0.5 million acres, a decline of 15 percent. In California, farmers intend to plant nearly the same amount of cotton as in 2001.

Cotton growers intend to plant 71 percent of upland cotton acres to biotech varieties, up from 69 percent last year. The intended adoption rate of herbicide-tolerant cotton, including stacked-gene varieties, is 59 percent of cotton acreage, up from 56 percent last year. In contrast, Bt cotton (also including stacked-gene varieties) is

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expected to be down, accounting for 35 percent of cotton acreage compared to 37 percent last year.

Rice. U.S. rice growers indicated plantings of about 3.3 million acres in 2002, virtually unchanged from a year earlier but almost 2 percent above the 1997-2001 average. Total returns to rice production, including marketing loan benefits, were estimated higher than returns from alternative planting options—primarily soybeans in the South—for most producers despite expectations of large carryover stocks this year and the lowest prices in 15 years.

This year, producers indicated long grain rice plantings of almost 2.7 million acres, less than 1 percent below last year's near-record. Nearly all long grain rice is grown in the South. Plantings of long grain rice are expected up in Arkansas, but down in Texas and Louisiana.

Combined medium/short grain planting intentions are up 2 percent, with California accounting for all of the expansion. Medium grain prices have strengthened since the start of the 2001/02 market year and have remained well above long grain prices, a result of a sizeable decline in the crop in California, where the bulk of U.S. medium grain is grown. In contrast, U.S. long grain prices have declined sharply since last summer.

Producers in the Mississippi Delta region indicated slightly higher rice acreage in 2002, with record plantings likely for Arkansas and Missouri. The Delta is the largest U.S. rice-growing region and has the lowest per-unit production costs. In contrast, producers in Texas and Louisiana indicated smaller rice plantings, with Texas reporting the fewest acres since 1936. The Gulf Coast, which consists of Texas and Southwest Louisiana, reports the highest per-unit production costs among U.S. rice growing regions.

Minor oilseeds. Peanut and sunflower planting intentions are down 5 percent and 4 percent, respectively. Sunflower plantings are expected to make way for higher-net-return corn, and perhaps canola. U.S. farmers intend to plant a near record 1.5 million acres of canola, up 4 percent from last year and nearly 45 percent from 1999, reflecting higher per-unit returns and fewer disease problems than sunflower production.

Hay. U.S. farmers intend to expand the area harvested for hay crops this year by about 200,000 acres, or 0.4 percent above last year. Texas indicates the largest increase in area harvested for hay crops, which are important feedstuffs for beef cattle and dairy operations. Hay prices are expected to remain strong (around $90 per ton) this spring, providing ranchers with the incentive to expand hay acreage. However, lower dairy cow numbers and anticipated decreases in beef production might temper the expansion of harvested hay acreage this year. AO

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With Corn Prices Falling, Why Are Planting Intentions Up?

U.S. farmers are planning to expand corn plantings in 2002 to 79 million acres, despite expected farm prices for corn that are lower than last year's. This represents an increase of about 4 percent from last year's actual planted acreage and a 2-percent rise from 2001 planting intentions. What explains the surge of corn plantings?

Based on the settlement price of new-crop December futures for corn in mid-March 2002, the expected farm price for corn of $2.07 per bushel is about 5 percent lower than last year. Analysis by USDA's Economic Research Service (ERS) indicates that, by itself, this price decline would lower corn plantings by 1.14 million acres from last year's level.

However, compared with competing crops (particularly cotton), the expected farm price for corn looks relatively attractive this year. The reductions in expected producer incentive prices (PIP)—market price plus either loan deficiency payments (LDPs) or marketing loan gains—were greater for some other crops than for corn. The PIP for cotton fell 11 percent from last year because of lower anticipated domestic prices (based on new-crop futures contract prices) and a narrower gap between the loan rate and expected world prices (which reduces LDPs to producers).

ERS research indicates that a 1-percent decrease in the expected cotton farm price would translate into a 0.072-percent rise in corn plantings. So, with an 11-percent decrease in cotton's per-unit returns, about 0.6 million acres of cotton cropland would be switched to corn. Of the major competing crops, the expected change in the PIP for cotton appears to have the most significant effect on this year's corn plantings. Altogether, about 0.9 million acres of cropland planted last year to competing crops (cotton, wheat, and sorghum) are bid away by corn this year due to relative changes in PIPs.

Also leading to the prospective expansion of corn plantings—particularly vis-à-vis soybean plantings—is a decline in the energy component of input costs this year. Last year's overall increase in energy prices prompted farmers to switch some corn cropland to soybeans because corn production uses significantly more (natural gas-based) nitrogen fertilizer relative to soybeans, and corn production became disproportionately more costly. ERS research indicates that last year's higher per-acre fertilizer and fuel cost in corn production was equivalent to a 4.59-percent decrease in the expected corn farm price. This resulted in an increase in the soybean-to-corn price ratio from 2.53 in 2000 to 2.62 last year (after adjusting for marketing loan benefits). The price effect attributed to the higher fertilizer and fuel costs increased last year's soybean plantings by 0.67 percent, or a switch of 500,000 acres of cropland from corn to soybeans.

But lower energy prices early this year appeared to dim the production cost advantage for soybeans. Factoring in reduced fertilizer costs and assuming unchanged loan rates, the expected soybean-to-corn price ratio at active planting decision times (around mid-March) decreased from 2.62-to-1 last year to 2.57-to-1 this year. The decline in the ratio suggests that corn could be more profitable than soybeans when compared with last year. It is likely that the 0.5 million acres of cropland that was switched to soybeans last year will return to corn production. In Iowa and Illinois, for example, most of each state's 0.3-million-acre increase in intended corn plantings probably indicate a switch from soybeans to corn—a pattern that is widespread throughout the Corn Belt region.

Changing the crop rotation system away from the traditional soybean-corn rotation and toward a soybean-corn-corn rotation has also likely contributed to the expansion of corn plantings. Many farmers felt that a soybean-corn rotation was not effective enough to control insect pests in soybean production, and that a soybean-corn-corn rotation might break the pest cycle more effectively. Disappointing soybean yields experienced by many farmers in recent years, coupled with higher corn yields, may have fueled the modification in the crop rotation system this year.

Uncertainty about the farm bill might also have motivated farmers to expand corn plantings. Although many producers expect that crop loan rates will remain intact, others remain wary of changes in loan rates (especially for soybeans) that might emerge from a new farm bill, which could apply to the 2002 crops. Preconference versions of both the House (H.R. 2646) and Senate (S. 1731) farm bill proposed a lower loan rate for soybeans than the current maximum, whereas the corn loan rate would remain unchanged or be higher under these proposals. AO

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As of this writing, House and Senate farm bill conferees were still working out the language of the legislation.

Commodity Spotlight

USDA photo: Doug Wilson

Oats Market Strong In 2001/02

Oats are the least prominent of the feed grains, but rising prices have garnered a tremendous amount of attention. The 5-year average grain value of U.S. oats production between 1997 and 2001 was $200 million, compared with nearly $20 billion for corn. Despite the relatively small production, however, oats have been gaining attention lately as prices climb and buyers scramble to ensure supplies. The tight supply has been caused by weather problems in the upper Midwest, and in the oats-growing regions of Canada, Sweden, and Finland.

At one time, oats were one of the most important crops grown in the U.S., but production began a steep decline in the 1950s. In the early 1950s, planted acres for oats ranked fourth among all principal crops, exceeded only by corn, wheat, and hay. Production declines were brought on by emergence of the internal combustion engine, which greatly reduced the need for horse feed. The declining value of oats as a rotation crop, and the emergence of other crops that earn greater farm returns, are additional factors that explain the drop in oats acreage. The U.S. became a net oats importer in the early 1980s and currently imports about 30 percent of the total supply, primarily from Canada.

Oats have historically been a multipurpose crop grown for numerous uses other than for cash grain. Nongrain uses include hay, pasture, and silage. Oats work well as a companion crop with the establishment of a forage such as alfalfa. The whole grain, which is high in fiber, is used in horse or ruminant feeds but is not commonly used for hog or poultry feed. Some horse owners feel that horses need oats as part of their ration. However, oats can often be replaced with other grains when oats prices are high, which has happened this year. Oat hulls, a byproduct of the milling process, are also used in feed rations.

The de-hulled oat (known as the groat) is used in a variety of food products. Food consumption of oats increased dramatically in the 1980s when possible health benefits associated with oats were announced, especially the potential for oat bran to reduce cholesterol. In contrast to the feed market, oats food uses usually cannot be replaced with other grains. This inability to substitute helps explain why milled oats prices, especially for food-grade oats, have risen so much over the past year relative to other grains.

Long-Term Decline in Oats Acreage & Production

Oats production occurs in many states. However, because oats only do well in a relatively cool climate, their production is concentrated in the upper third of the U.S. The five states with the largest average oats production from 1997-2001 were North Dakota (19.1 million bushels), Minnesota (17.9 million bushels), Wisconsin (17.7 million bushels), South Dakota (13.8 million bushels), and Iowa (12 million bushels).

Average production figures from 1981-85 showed that the same five states were the top oats-producing states in the country (although in a different order). Oats production has steadily declined in these states because farmers are planting other crops with higher per-acre returns.

Major causes of shifts in farmer planting decisions are improved crop genetics and the planting flexibility provided by the 1996 Farm Act. Improved genetics for crops other than oats have led to expanded corn and soybean acres outside the traditional Corn Belt, which has cut into the production of all small grains, including oats, in these areas. Of the five major oats-producing states, this change has most affected northwestern Minnesota and the Dakotas. For example, 2001 harvested soybean acres in North Dakota were 2.1 million acres, up 325 percent from 1990; harvested area for North Dakota corn in 2001 was 705,000 acres, up more than 50 percent from 1990. By contrast, oats acres in North Dakota declined 60 percent between 1990 and 2001.

Improved genetics have increased crop options, and planting flexibility enables farmers to base planting decisions on economic reasons. Under traditional farm legislation, planting decisions were determined to a large extent on the farmer's base acres for different program commodities, including oats. However, after the 1996 Farm Act, farmers were able to plant virtually any crop on their contract acreage without losing program benefits.

As of this writing, House and Senate farm bill conferees were still working out the language of the legislation.

Also, with the elimination of acreage reduction programs under the 1996 Farm Act, oats are no longer planted as a cover crop on acreage idled under annual farm program provisions.

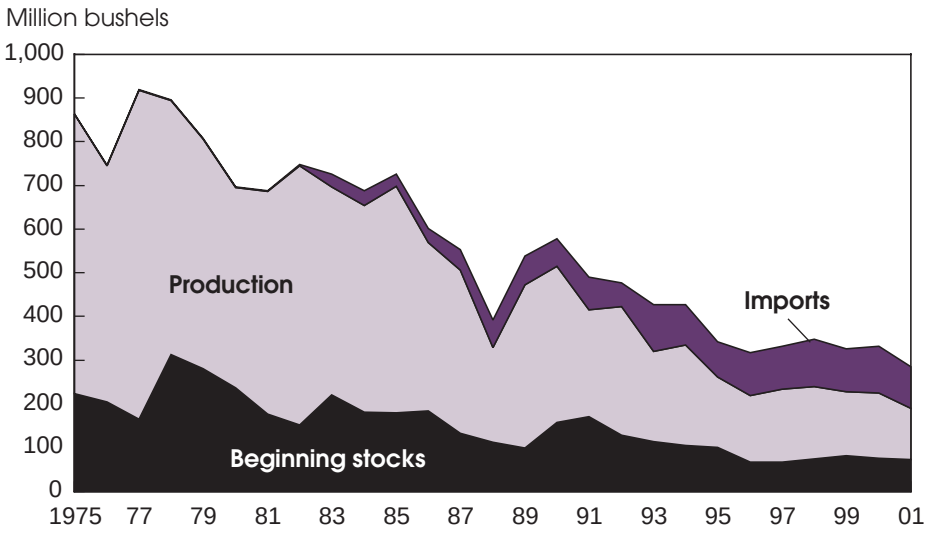
With planting flexibility, farmers have been free to plant the crops that provide the highest market return. In the current marketing year, national average farm returns over variable costs (including government marketing loan benefits) are estimated to be $118 and $137 per acre for corn and soybeans, respectively, compared with $44 for oats. Although farmers outside of the traditional corn and soybean growing regions may have lower net returns for corn and soybeans and higher returns for oats, there has been a clear economic incentive for farmers who at one time planted oats to now plant other crops.

In contrast to the U.S., recent oats production has been rising in Canada. Like the U.S., Canadian production had begun declining in the 1950s, although it trended upward during the 1990s. About 90 percent of Canada's oats are grown in the western provinces, mainly Saskatchewan (with about 40 percent of total Canadian production), Manitoba (25 percent of total production), and Alberta (more than 20 percent of total production). The growing need for U.S. imports is the primary reason for the increase in Canadian oats production. In addition, several U.S. mills have relocated to Canada in order to have a milling presence in a primary production region.

U.S. oats supplies in the 2001/02 marketing year are down from last year because of lower beginning stocks and a decrease in production and imports. Production in 2001 was 117 million bushels—33 million below 2000—the lowest production since records were first kept in 1866. Decreased planted area, harvested area, and yields all contributed to the decline in production. Planted acreage, at 4.4 million acres, was down nearly 2 percent from 2000, and harvested acreage was down 18 percent to 1.9 million acres. Oats yields in 2001/02 were 61.3 bushels per acre, down from 64.2 bushels in 2000/01.

Weather problems affected oats-growing areas throughout the growing season.

Oats Supply Has Become More Dependent on Imports



Source: Foreign Agricultural Service and National Agricultural Statistics Service, USDA.

Economic Research Service, USDA

The planting season began slightly later than normal and much later than the early start in 2000/01. Moisture shortages hindered germination and early growth in parts of the eastern Corn Belt, and below-normal precipitation limited crop potential in parts of the western Corn Belt, Great Plains, and Pacific Northwest during the summer. Cool weather in late May and early June hindered development across most of the Corn Belt and northern Great Plains. At the end of June, just over one-half of the acreage was headed, compared with the historical average of nearly two-thirds.

Harvest began late and progressed behind normal in Iowa, Minnesota, Nebraska, South Dakota, and Wisconsin. In the eastern Corn Belt and Northeast, ideal temperatures and mostly adequate moisture supplies aided late-season development. The harvest season in Ohio and Pennsylvania progressed ahead of the 5-year average.

According to the 2002 *Prospective Plantings* report, growers intend to plant 5.1 million acres and harvest 2.5 million acres in 2002/03. If realized, this would be a 16-percent increase in planted area and a 33-percent increase in harvested area. This would reverse 4 straight years of acreage declines (both planted and harvested) and would be the largest oats acreage planted since 1998/99. Rising price is the main factor behind increased area prospects for 2002/03.

Low Import Supplies Have Raised Oats Prices

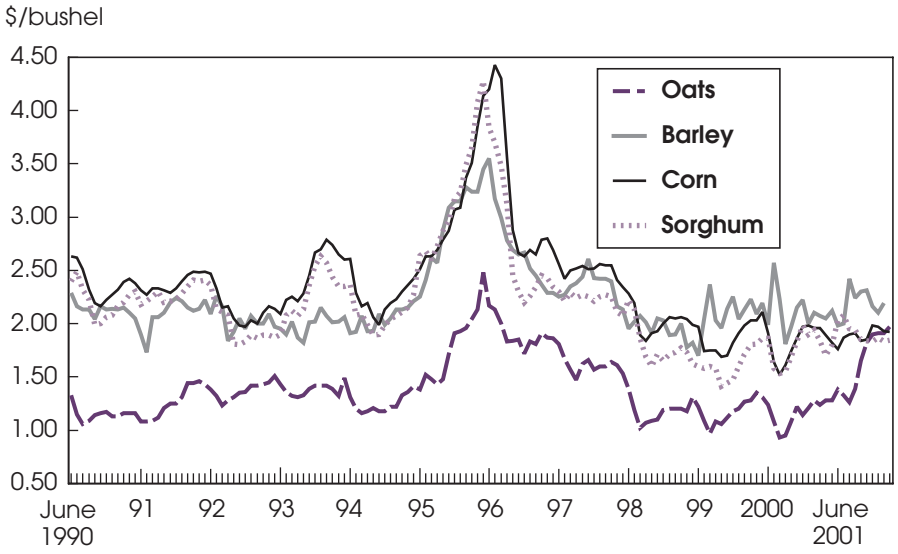
Imports in 2001/02 are expected to total 95 million bushels, down from 106 million in 2000/01, because of reduced production in the major exporting countries. The U.S. imports oats primarily from Canada, with lesser amounts from Finland and Sweden. All three countries tend to have cooler summers that are conducive to production of the heavy white oats favored by the food processing industry and many horse enthusiasts. Imports are forecast to comprise about one-third of the U.S. oats supply in 2001/02.

Total oats use in 2001/02 is expected to equal 230 million bushels, down 29 million from a year earlier. Ending stocks are forecast down 25 percent from the 73 million bushels in 2000/01. Food and seed use is expected to increase 4 million bushels above the 2000/01 level. Feed and residual use in 2001/02 is expected to be down 34 million from the 189 million bushels used in 2000/01.

Prices received by farmers for oats in 2001/02 are expected to average about

Commodity Spotlight

Average Farm Prices for Oats Rising Relative to Other Feed Grains



Source: National Agricultural Statistics Service, USDA.

Economic Research Service, USDA

$1.55 per bushel, compared with $1.10 in 2000/01. Average prices from June 2001 through March 2002 were $1.62, compared with $1.13 during the same period last year.

Global Production Increased In 2001/02...

Global oats production in 2001/02 is estimated at 26.7 million tons, up 4 percent from last year and the highest since 1997/98. Most of this increase came from the former Soviet Union and Eastern Europe. Russia, the world's largest oats producer, produced 7.7 million tons in 2001/02, up from 6 million tons last year. Virtually all of this output will be consumed in Russia. Production also increased in Ukraine and Belarus. Eastern European production increased 17 percent to 2.3 million tons, with most of the gain in Poland.

Partly offsetting these increases are drops in Canada and the European Union (EU). Production in the EU is estimated at 6.5 million tons in 2001/02, down 6 percent from a year earlier. Finnish production is up slightly at 1.3 million tons; Swedish production dropped 150,000 tons to 1.15 million.

Canadian oats production for 2001/02 is estimated at 2.8 million tons, down from 3.4 million the previous year. Drought conditions throughout the Canadian prairies and excessive moisture in parts of Manitoba led to a 17-percent decline in yield and a nearly 2-percent decline in harvested area. A combination of the short U.S. crop and the drop in Canadian production led to the tight supply situation, which sent oats prices skyward. Continued dryness in Saskatchewan and Alberta is causing concern about the upcoming crop.

The drop in Scandinavian oats production had an impact on the U.S. market. However, the primary international factor affecting the U.S. was the production shortfall in Canada, the largest oats exporter to the U.S.

...but World Trade Is Projected to Decline

Oats are a thinly traded commodity where most of the world production is consumed in the country of origin. Despite larger overall production, total oats trade is projected at 1.9 million tons in 2001/02, down 15 percent from 2000/01. Canada's production decline is behind the drop in world trade, and North American production problems have required the U.S. to look for other sources of oats imports.

In response to the drop in Canadian and U.S. oats production, U.S. importers have increased the quantities purchased from nontraditional sources and have "front-loaded" imports to the early part of the marketing year.

Finland and Sweden are major oats suppliers to the U.S., although they also have major markets elsewhere, and production dropped for 2001/02. On an October-September basis, the U.S. is projected to import 1.2 million metric tons in 2001/02, down from 1.8 million last year and the lowest since 1995/96. However, for October to December (the first quarter of the marketing year) total imports were 611,000 tons, up 27 percent from the same period in 2000/01 and the highest since 1997. Canadian exports to the U.S. from October to December were 462,000 tons, up nearly 7 percent from the prior year. Scandinavian exports to the U.S. were also up for the October-December period.

Import pace is rapid because buyers, concerned that supplies will become even tighter, are making their purchases earlier. Because of the tight supplies, imports are expected to decline significantly in the latter part of the marketing year.

World stocks are projected to increase due to larger global production (increases in the Former Soviet Union and Eastern Europe), but stocks from the major U.S. trading partners are projected to decline significantly. Canadian oats stocks are projected at 500,000 tons, down 40 percent from last year and the lowest since 1995/96. EU stocks are projected to increase, but quantities of high-quality milling oats are limited. Tight stocks could have a serious impact on the U.S. market if continued dryness in the oats-growing regions of Canada and the U.S. leads to low production in 2002/03. AO

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Argentina's Economic Crisis: Can the Ag Sector Help?

In the past year, a number of relatively long-standing economic problems in Argentina have converged to create a full-fledged economic crisis. With Argentina's economic future remaining cloudy, the current crisis could produce important spillover effects on the agricultural sector that may diminish Argentina's competitiveness in international commodity markets.

Underlying the current economic crisis are three interrelated factors: the policy of pegging the domestic currency to the U.S. dollar at a fixed one-to-one rate throughout most of the 1990s, the failure of the Argentine government to reduce budget and trade deficits, and the ensuing default on government debt.

In 1991, Argentina pegged its *peso* to the dollar to control the hyperinflation of the late 1980s and early 1990s. Unfortunately for Argentina, fixing the *peso's* exchange rate at a one-to-one ratio with the dollar ultimately resulted in less competitive *peso*-priced commodities in international markets and artificially high domestic wages following strong appreciation of the U.S. dollar beginning in 1996.

The problems associated with an overvalued currency were compounded by Argentina's failure to lower its budget deficit and finance the trade deficit. This led to suspension of an International Monetary Fund (IMF) loan payment to the Argentine government due in December 2001 and subsequent default on sovereign (public) debt. In the wake of the default, the *peso*-dollar peg collapsed, and Argentina's recession—which had emerged in 1998—turned into a depression. Argentina's Gross Domestic Product (GDP) is projected to shrink by about 10 percent in 2002 alone, and a further contraction in 2003 is all but inevitable. A complicating factor in stabilizing the government's overall budget picture is the apparent inability to constrain provincial (state-level) spending even as provincial tax revenues have fallen.

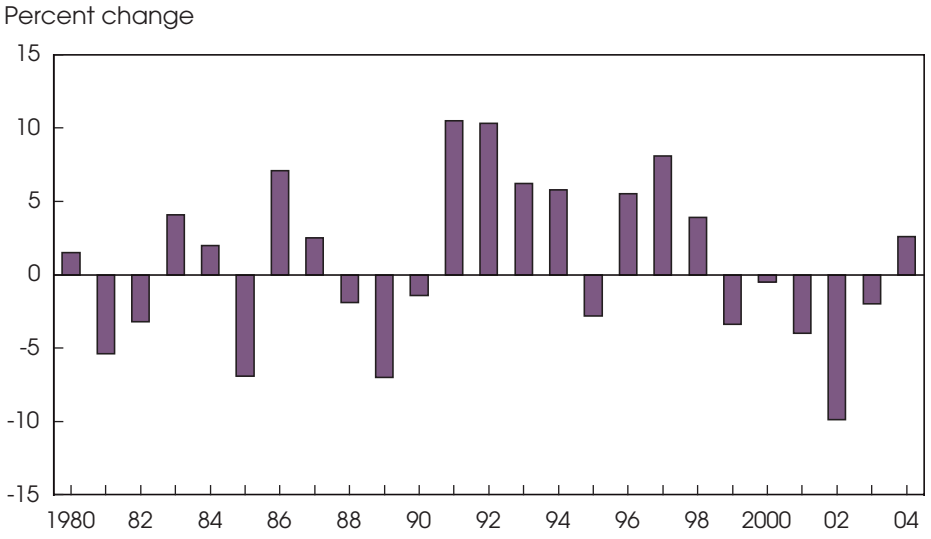
Argentina's attempts to recover from the crisis have been hampered by multiple changes in government leadership and exchange-rate policies and controls. In early December 2001, the government of Argentina (GOA) imposed a banking freeze—know as the "corralito"—on all personal savings accounts. Initially, only minimal withdrawals were permitted. The banking freeze has greatly eroded confidence in both the government and the banking system, while severely reducing liquidity in local markets. In late December, widespread civil unrest followed the banking freeze and resulted in several deaths and significant destruction in the financial center of Buenos Aires.

In January 2002, as part of a gradual loosening of the "corralito," the GOA allowed monthly salary deposits to be withdrawn. The government also announced a dual exchange rate with a pegged rate of 1.4 *pesos* per dollar and a market-determined rate that has since exceeded 3 *pesos* per dollar. The official rate of 1.4 *pesos* per dollar was mandated to cover essential imports and all exports, whereas the market rate applies to nonessential imports, tourism, and most financial transactions. (To date, the Argentine government has not categorized agricultural inputs as either essential or nonessential.) On February 11, the GOA allowed a total "float" of the exchange rate for most goods and services, although the central bank uses a discounted rate (which acts as an implicit export tax).

These developments have led to credit policies that have disrupted Argentina's bank operations and credit markets. Dollar denominated small bank loans and mortgages are to be converted to *pesos* at a one-to-one exchange rate, despite the *peso's* drop in value. Banks in Argentina could lose over 20 billion *pesos* as a result of being saddled with devalued loan assets that would be repaid in *pesos* at the rate of one *peso* per dollar rather than at the market rate. The government has imposed export taxes on various products to compensate banks for losses caused by repayment of dollar-denominated debt in devalued *pesos*. Lenders are not the only ones to suffer. Savings deposits and other financial assets are only convertible to dollars at the less attractive prevailing market rate. Limitations on the amount of savings convertible to dollars per day have also been established.

Initially, the one-*peso*-to-one-dollar conversion rate for existing debt repayment placed agricultural creditors in the position of having to accept enormous losses on loans for the current crop year (2001/02). However, Argentina's agricultural input suppliers—who furnish most of Argentina's $2.5-$3 billion in shortrun agricultural operating credit—refused to accept the conversion terms and their

Argentina's Real GDP Is Forecast to Continue Sliding Until 2004



2002-04 forecast.
Source: DRI-WEFA

Economic Research Service, USDA

implied losses. Eventually the GOA reversed course and has offered conversion of shortrun agricultural debt at the floating exchange rate, but this episode compounded sectoral risks and will certainly raise operating costs throughout the marketing chain.

Argentina's devaluation should eventually benefit the economy in the form of increased exports and inward foreign direct investment once the country's fiscal house is in order. In the near term, however, the supply-side effects of capital controls, including the flow of capital out of the country, are devastating. Even large corporations are having trouble obtaining dollars needed to buy imports such as computer equipment and machine parts. The resulting shortages are crippling both the domestic and export economies, making prospects for near-term recovery unlikely.

Dampening the prospects for export-led recovery is the recent imposition of export taxes on some products. In February 2002, the GOA announced export taxes of 20 percent on petroleum products and crude petroleum. This was followed in March by export taxes of 10 percent on most other primary products (soybeans were to be taxed at a 13.5-percent rate), and lower differential export taxes (DETs) of 5 percent on processed products including soybean oil and meal. Then in April, export taxes were raised to 20 percent for many agricultural products, including wheat, feed grains, and vegetable oils and meal, thus eliminating most DETs.

Soybeans are still assessed a 3.5 percent surcharge, making the export tax 23.5 percent. Major exceptions to this tax structure include a 5 percent export tax on meat, and a 10 percent rate for fruits, cotton, and rice.

A further major uncertainty clouding the export picture is the GOA's failure to comply with contractual commitments made to major grain and oilseed export companies. For example, a steep 21.5-percent value-added tax (VAT) applied on all domestic sales was traditionally reimbursed to companies that subsequently exported domestically produced agricultural products (The VAT was recently lowered to 10.5 percent for all grain and oilseeds transactions, and should not be confused with the export tax mentioned above). However, in December 2001, the GOA stopped VAT reimbursements to export companies, who were left waiting for nearly $700 million in outstanding payments. After protracted discussions with the major export companies, the GOA agreed to repay the VAT reimbursements for exported goods in a series of 19 monthly payments beginning in March 2002. However, as of early April, the GOA had yet to make even the first of these monthly payments.

Decline in 2002 All but Certain

Major private forecast services (DRI-WEFA, Oxford Economics Forecasting, the London Economist) expect Argentina's GDP to shrink by 10 percent in 2002, with inflation of between 20 and 50 percent. Forecasters expect the Argentine exchange rate to range between 3 and 4 *pesos* per dollar by late 2002, representing a depreciation of 66 to 75 percent from the fixed one-to-one peg with the dollar. Short-term interest rates are expected to be in the range of 30 to 40 percent. With the official unemployment rate likely to be above 30 percent and with the prospect of inflation and GDP shrinkage also at double-digit rates, it is no exaggeration to say the Argentine economy is in a severe depression.

To view this in perspective, no country directly involved in the Asian financial crisis of 1997-98 experienced such a large cumulative decline in GDP as Argentina already has. Furthermore, the policy levers usually used to pull a country out of recession are not viable for Argentina. Loose monetary policy (e.g., interest rate cuts by the central bank) would drive inflation further up. Loose fiscal policy—some combination of tax cuts and/or increases in government spending—would lead to large structural budget deficits and would further drive long-term interest rates to levels high enough to offset any stimulative effects. Consequently, upside prospects for the Argentine economy in the near term are dim.

In 2002, the ability of Argentine banks to make even short-term loans continues to be very restricted. If inflation rates approach or exceed 20 percent, the risk premiums built into loans will be substantial and will likely grow, driving real interest rates even higher. The government's inability to collect tax revenue in proportion to its direct debt obligations

remains a problem. As businesses and individuals routinely evade taxes, nominal rates on less avoidable taxes on business activity—such as VATs—are likely to rise, hindering new business development and consumer confidence.

Agricultural Sector: Part of the Solution?

Exports of farm products, crude oil, and manufactured goods will likely play an important role in pulling the Argentine economy out of its deep recession. The question is when. Market signals that might normally encourage greater farm exports are greatly muted as the higher *peso* prices received by farm producers are offset by export taxes, elevated input prices, rising interest rates, and tighter credit conditions.

Peso-valued commodity prices are expected to rise due to the devaluation, but the effective price paid to grain farmers is not likely to keep pace, thus dampening production incentives. The cost of most inputs—including new capital and imported inputs—could rise by as much as 100 percent. Nitrogen-based fertilizer and fuel, although domestically produced, are expected to at least double in cost, offsetting any gain in output prices.

In addition, the percentage markup for transportation and export marketing expenses will likely rise due to increased market and policy uncertainty, and increased export taxes will further lower effective earned prices for commodities. Improved access to farm credit is also very unlikely. The banking system's deteriorating balance sheets have been strongly pressured by farm debt burdens accumulated over the last decade, farming's high risk, and increased export price volatility.

One way for Argentine farmers to mitigate the input cost situation is to change cropping patterns. If this happens, farmers are likely to plant more soybeans and less corn, since corn normally relies on more intensive use of fertilizer, diesel fuel, agricultural chemicals, and high-cost hybrid seed that a farmer cannot save from the current crop to plant next year. Although Argentine corn growers tend to have lower fertilizer application rates than their U.S. counterparts, operators using fertilizer will still have strong economic incentive to switch to lower input soybeans.

Wheat cultivation normally requires more fertilizer than soybeans, but wheat production is unlikely to decline much because of the cash-flow benefits offered from wheat-soybean double cropping (although less fertilizer will likely be used). Cash generated from the wheat harvest can be used to finance production of the follow-up soybean crop, thereby sidestepping costly credit markets. However, medium and small single-crop operators may have a difficult time financing even the lower input costs associated with soybeans.

Prospects for Argentine farm exports hinge on whether the farm sector adopts innovative solutions to deal with higher business costs. During past economic crises, the farm sector has been able to cope and expand. This current economic crisis, due to its severity, will tax the innovative abilities of farm operators.

At this time, efforts by the Argentine government to negotiate a rescue package with the IMF have not been successful. Further, if the expected macroeconomic forecasts materialize and the economy goes into free fall, agricultural exports may be greatly hindered, particularly if credit continues to be generally unavailable or a significant additional tax is imposed on farm exports. Instead, farm exports could shrink. AO

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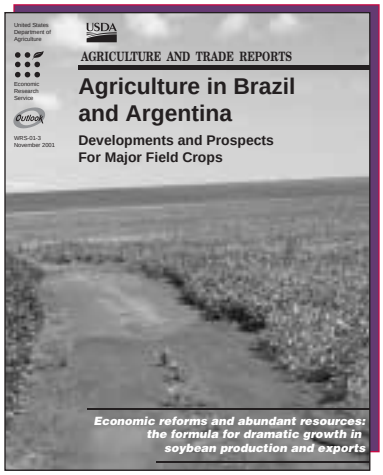
Agriculture in Brazil and Argentina: Developments and Prospects for Major Field Crops

Policy reforms in the 1990s, combined with abundant resources and new developments in agricultural research, spurred dramatic growth in Argentina's and Brazil's crop output and exports. Their increasing competitiveness in world oilseed and grain markets may foreshadow continued gains, as their economies become more integrated into global markets. In each country, the development of infrastructure, the dynamics of the livestock sector, and the stability of the economy will determine the pace of further growth in production and exports.

www.ers.usda.gov/publications/wrs013



William Liefert

Could the NIS Region Become a Major Grain Exporter?

When market-oriented economic reform began in the New Independent States (NIS) of the former Soviet Union in the early 1990s, some Western forecasters predicted that reform could transform the region from a large grain importer (as during the Soviet period) into a major grain exporter. However, in each year from 1994 to 2000, the NIS region recorded net grain imports or exports of only a few million metric tons (mmt). In marketing year 2001/02, the region is expected to have net grain exports of about 10 mmt, mainly wheat and barley, to non-NIS countries. The exportable surplus coincides with rising NIS grain production during the last 3 years, yielding a bumper harvest of 93 mmt of wheat and 36 mmt of barley in marketing year 2001/02.

In addition to these grain production and trade developments, there are signs that Russia (if not Ukraine and Kazakhstan) may be improving its agricultural system to increase productivity, perhaps presaging a long-term rise in output. For example, new large, vertically integrated producers in the Russian agriculture and food economy, typically financed and managed by enterprises outside agriculture, could bring more efficient management to the sector than the former state and collective farms that currently dominate agriculture.

During most of the 1990s, annual growth in gross domestic product (GDP) in Russia, Ukraine, and Kazakhstan (the main NIS grain producers) was negative. In the last 2 years, however, GDP in the three countries has risen annually by 5-10 percent. The recent improvement in NIS macroeconomic performance has stimulated grain production and exports, particularly because farms are better able to take advantage of soft credit provided by the government. Soft credit and other forms of subsidies in all NIS countries plunged during the transition period of the past decade, more from dwindling state revenues than from deliberate government policy.

Russia, in its negotiations for accession to the World Trade Organization (WTO), is asking for maximum allowable subsidies that are more than 10 times the current level. This is equal to 4-5 percent of current GDP, and almost equal to the country's agricultural GDP (7 percent of total GDP). Russia is also pushing for export subsidies, despite using no agricultural export subsidies during the transition from a planned to a market economy. The Russian government's optimistic plans for subsidization are due to the expected growth in GDP and government revenue.

Could rising agricultural productivity in Russia and the other major NIS grain producers, combined with possibly expanding subsidies, finally transform the NIS region into a major grain exporter?

Should the NIS Region Export Agricultural Products?

Whether or not the NIS region becomes a major grain exporter depends mainly on whether it can produce grain at a relatively low cost compared with other major grain producers—that is, whether or not the region has a *comparative advantage* in grain production relative to the world market. Recent analysis by USDA's Economic Research Service (ERS), shows that Russia has a comparative disadvantage in producing agricultural outputs compared with inputs (specifically for the years 1996-97).

Among the various methods available for calculation and analysis, the social cost-benefit (SCB) approach was used, which involves computing SCB ratios for all products being analyzed. The SCB ratio for a good equals the cost of domestically producing the good in Russia (measured in rubles), divided by the good's trade price, measured in U.S. dollars. In the numerator of the ratio, tradable intermediate inputs used in production are also valued at world market prices.

The SCB ratios allow the ranking of goods on a comparative advantage spectrum. If the ratio for good A is less (greater) than the ratio for good B, the country has a comparative advantage (disadvantage) in producing A relative to B. This is because it costs less to produce an amount of A that sells for $1 on the world market than it costs to produce an amount of B that sells for $1 on the world market. The SCB ratios ERS computes for agricultural inputs (such as fertilizer and fuel) are less than those for agricultural outputs, which indicates that Russia has a comparative advantage in producing agricultural inputs compared to outputs. The comparative disadvantage of agricultural output production implies that it should decline in favor of the production

of agricultural inputs. The ratios for grains are less than those for meat, which means that Russia has a comparative advantage in producing grain compared with meat. This suggests that meat output should fall more than that of grain.

These results are wholly consistent with—and help explain—the major changes in Russian agricultural production and trade during the transition. The livestock sector (both animal inventories and output) has been cut in half since 1992, and imports of meat (especially poultry from the U.S.) have surged. The elimination of the massive subsidies given to livestock producers during the Soviet period resulted in falling meat production, bringing it more in line with its comparative advantage. With the contraction of the livestock sector, the large Soviet-era imports of grain, soybeans, and soybean meal, needed to feed livestock herds during the Soviet period, have ended. Use of intermediate inputs in agriculture (fertilizer, machinery, fuel, feed) has fallen substantially, while the country has become a large exporter of products that could be used domestically as inputs in agricultural production (including 80 percent of its fertilizer output). The large drop in domestic use of key inputs such as fertilizer, as well as heavy export of those products, has cut grain yields and harvest levels, working against the country being a big grain exporter.

Although ERS research on NIS agricultural comparative advantage has been confined to Russia, the commodity developments identified for Russia during transition apply also to Ukraine, Kazakhstan, and the NIS region in general. These include contraction of the livestock sector; virtual elimination of imports of grain, soybeans, and soybean meal; a large drop in domestic use of intermediate agricultural inputs; and export of agricultural inputs. Ukraine, for example, exports about two-thirds of its fertilizer. These similar commodity developments suggest that the cost structure of agricultural production throughout the NIS is similar to Russia's. The economic fundamentals of the NIS region, reflecting relative costs of production of outputs and inputs, currently do not support large grain trade—either imports or exports.

Using Models for Forecasts on NIS Agriculture

USDA's Economic Research Service (ERS) uses forecasting models for Russia, Ukraine, and the rest of the NIS combined, which are integrated into a world agricultural model to generate long-term projections. The individual models incorporate assumptions for values that reflect the analysis and judgement given in this article on:

- real exchange rates;
- consumer income;
- price and exchange rate transmission elasticities, which represent the degree of these economies' integration into world agricultural markets;
- agricultural productivity;
- state subsidies to agriculture; and
- state trade restrictions.

For more information concerning forecasts for NIS agriculture, as well as other topics in NIS agriculture, see the ERS briefing rooms on Russia and Ukraine.
http://www.ers.usda.gov/briefing/Russia
http://www.ers.usda.gov/briefing/Ukraine

Projections for U.S. and world agricultural supply, demand, trade, and prices can be found at the ERS agricultural baseline briefing room.
http://www.ers.usda.gov/briefing/baseline.

Grain Export Levels & Competitiveness Could Change

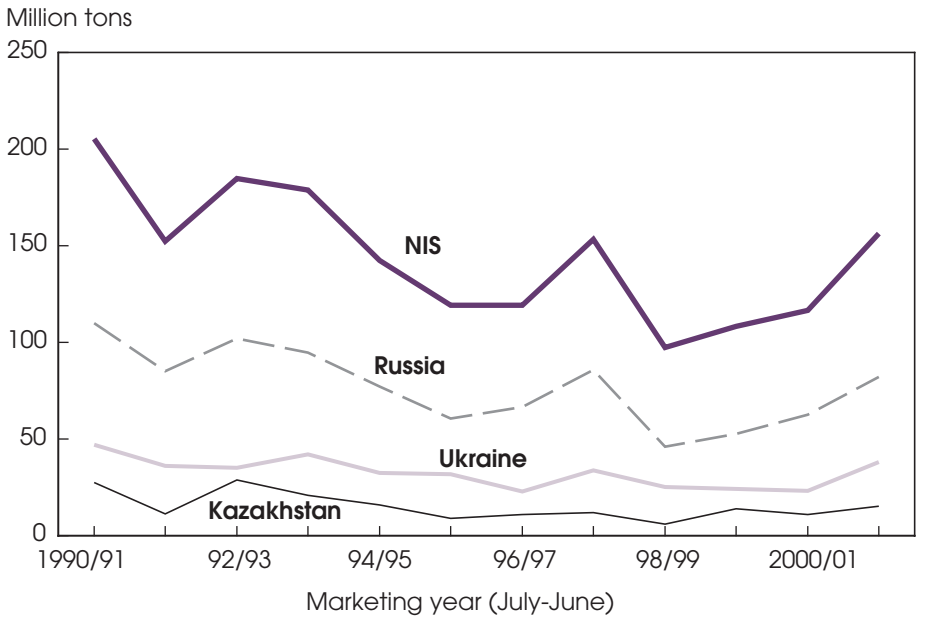
The SCB calculations provide a recent "snapshot" of Russia's agricultural comparative advantage. Production costs and other economic fundamentals are currently working against a large volume of NIS grain exports. In the future, a number of factors could change to alter the cost-competitiveness and export volumes of grain, either positively or negatively. These variables include:

- weather;
- real exchange rates;
- consumer income;
- port capacity constraints;
- agricultural productivity; and
- state policy.

Weather. The rise in grain output over the last 3 years, resulting in medium-level grain exports in 2001/02, could be explained largely and simply by favorable weather. Since 1998's severe weather, which resulted in the NIS region's lowest grain harvest in decades, weather has steadily improved, with 2001 an outstanding year for grain and other crops. The 2001 NIS grain harvest was 157 mmt, compared with average annual output over 1996-2001 of 126 mmt. Weather to date for 2002 has generally been favorable, but many crops are just entering the most critical period of development. For long-term predictions, the effects of weather are assumed to be neutral.

Real exchange rates. Russia's economic crisis of 1998, which affected the entire NIS region, resulted in major depreciation of NIS currencies, in both nominal and real (inflation-adjusted) terms. For example, from the start of the crisis in August 1998 through the end of 1999, the Russian *ruble* and Ukrainian *hryvnia* depreciated in nominal terms by about 80 and 65 percent, respectively. Currency depreciation substantially improved the price competitiveness of NIS grain on the world market, and likely helped the NIS region become a grain exporter in 2001/02. In 2000, however, NIS currencies began appreciating in real terms (because the inflation rate exceeded the nominal rate of currency depreciation). In the view of Western financial experts, NIS currencies are still undervalued relative to Western currencies. Real currency appreciation is therefore likely to continue in the near to

NIS Grain Production Has Risen in Recent Years



Economic Research Service, USDA

medium term, particularly if NIS economies keep growing at high rates. The effect of changes in real exchange rates on NIS grain exports is expected to be negative.

Consumer income. GDP is projected to grow in most NIS countries during the next decade by 4-5 percent a year. Given that demand for livestock products is relatively sensitive to changes in consumer income, GDP growth might help revive demand for meat products, and consequently for feed grains as well. The growing domestic demand for feed will cut into domestic grain surpluses available for export.

If agriculture and food markets in the NIS region are functioning well internally and are well integrated into world agricultural markets, any rise in consumer demand for meat would have little or no effect on grain exports. When domestic markets are well integrated into world markets, domestic producer prices are predominantly determined by world trade prices. Thus, an increase in domestic demand for a foodstuff, such as meat, will only slightly affect domestic producer prices, and therefore only slightly affect domestic meat production. Most of the rise in domestic demand for meat would be met by additional imports (or by reduced exports, if the country is a net meat exporter), not by a change in meat output. There would be little or no secondary effect on domestic grain markets. If markets in the NIS region are not functioning well, however, the projected GDP growth should significantly stimulate meat producer prices and domestic production.

How well integrated are NIS agriculture and food markets into world markets? ERS estimates indicate that the transmission of changes in world trade prices, and in the exchange rate, to changes in Russian domestic prices for foodstuffs is fairly weak. Thus, the country's integration into world agricultural markets is poor. Undeveloped physical and institutional infrastructure (such as poor transportation and weak legal and market information systems) segment regional markets from each other and cut off regional markets from the world market. Although the ERS estimates are confined to Russia, the other NIS countries have made no more progress than Russia in improving their physical and institutional infrastructure for agriculture. Another factor that can "separate" regional markets from the world market, to the benefit of regional producers that must compete with imports, is differences in quality and taste between locally produced and imported goods, such that consumers prefer their local products.

Over the next decade, the NIS countries are likely to improve their infrastructure and integration into world markets. Increased Western investment (which the Russians identify as a major motive for joining the WTO) could play a key role in developing agricultural infrastructure and linkages. NIS grain producers might also improve their skills at marketing their output to foreign buyers. Nonetheless, progress in these areas will probably not be rapid. Because of lingering segmentation of regional markets, the anticipated growth in consumer income is likely to motivate some rise in domestic production of livestock products. The effect on grain exports is expected to be negative.

Port capacity constraints. Ports in both Russia (such as Novorossysk) and Ukraine (such as Odessa) operate under capacity constraints for exporting grain. All Black Sea ports, through which Ukraine's and much of Russia's grain exports have to move, currently have a total annual grain export capacity of only about 8 mmt (lack of elevators being the main bottleneck). Capacity should improve over time, but progress will be slow in building this physical infrastructure, which will continue to constrain growth in grain exports.

Agricultural productivity. Agricultural productivity (output per unit of input) in the Soviet Union was traditionally much lower than in the U.S. and other western countries. If the vast potential for productivity growth were realized, reform could transform the NIS region into a major grain exporter.

However, recent analyses find that productivity growth in NIS agriculture during the transition has been poor. ERS estimates indicate that from 1993 to 1998, productivity in Russian crop production fell by 8 percent overall. Another study finds that total agricultural productivity in Russia and Ukraine rose from 1992 to 1997, but by a paltry total of 7 and 2 percent, respectively (the difference in results is largely due to the large drop in fertilizer use from 1992 to 1993). Failure to improve productivity is due to the incom-

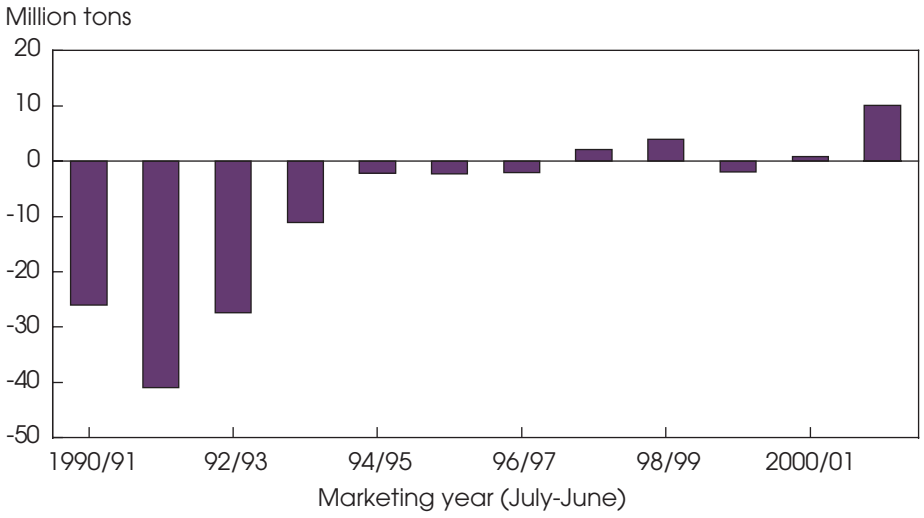
plete implementation of reform in Russia, Ukraine, and most other NIS countries. Reforms are needed to improve farm-level organization and management, as well as to develop the physical and institutional infrastructure that supports agricultural production. However, private farming has not developed to any substantial degree; effective land and rural credit markets have not emerged; and, a commercial legal system is not yet in place to protect property and enforce contracts.

Russia shows signs of perhaps developing more progressive forms of farm organization and management. New, vertically integrated producers are emerging in the agriculture and food sector, with finance and management often coming from outside the sector. These new operators could stimulate productivity growth by improving both the technology of the country's production and its system of organization and management. Yet, no empirical evidence exists to show whether these new operators have increased productivity. Also, even if successful, the new producers might simply represent the best possible management and production practices within the economy's existing technology and administrative systems. Any productivity gains might come from strengthening vertical ties for production and distribution of output, rather than from real technological or systemic change.

Legislation was recently passed in Ukraine, and a similar law is proposed by the Russian government, that would sanction agricultural land markets, allowing the relatively free buying and selling of farmland. The complete implementation of land reform, allowing the use of land as collateral, would help develop a credit market for agriculture. It is unclear, however, whether or not the land legislation will be successfully implemented.

If thoroughly implemented, these reform efforts should have a positive effect on productivity. Because there is little evidence that reforms will be pursued with the necessary vigor, productivity growth during the next decade is anticipated to be moderate. The effect of productivity growth on grain exports is expected to be only mildly positive.

Net Grain Exports from NIS Up in 2001/02



NIS net grain exports beyond the NIS region.

Economic Research Service, USDA

State policy. Although institutional-type reforms can affect grain output and trade volumes by raising productivity, there are two categories of state policy that can more directly impact grain export potential. The first is subsidies for production and exports. Current levels of state support to NIS agriculture are historically low. The NIS agricultural establishments are hoping that GDP growth will provide the government with the budgetary resources to raise support. In its agricultural negotiations for WTO accession, Russia is pushing for maximum allowable budget subsidies more than 10 times the current level, as well as for export subsidies (which Russia has not used during the transition period). Because NIS support to agriculture is more likely to rise than fall in the near to medium term, the effect of changes in support policies on grain exports would be positive.

The second state policy with direct impact is regional governmental controls on grain outflows, which have the effect of reducing national exports. Such controls are common in both Russia and Ukraine. There are two possible reasons for the restrictions:

- regions want to ensure that local food needs are met; or
- local officials deliberately create price differences between regions, then control grain outflows in order to earn profits by selling to regions where prices are higher.

The federal governments of the NIS countries oppose these controls. Such restrictions could also create monitoring and enforcement problems for WTO membership. Thus, over time these controls are likely to weaken, and the effect of the policy change on grain exports is predicted to be positive.

NIS Region Likely to Be a Medium-Level Grain Exporter

Likely developments in the future that would exert downward pressure on NIS grain exports are the real appreciation of currencies and income growth. Limited port capacity for exporting grain would not cause current export levels to drop, but rather would act as a constraint on large growth in exports. The likely developments that will have a positive effect on future grain export volumes are:

- improvement in physical and institutional infrastructure;
- productivity growth in agriculture; and

World Agriculture & Trade

- changes in state policy, specifically rising support to agriculture and weakening regional controls over grain outflows.

Among these developments, productivity growth is probably the most influential (even given our expectation of only modest growth over time). It would improve agriculture's cost competitiveness and thereby move the NIS toward a comparative advantage in agricultural production.

On balance, developments that will exert a positive effect should outweigh those that will exert a negative effect. Over the next 10 years or so, the NIS region could well become a medium-level grain exporter of 5-10 mmt per year.

In the most recent USDA global agricultural 10-year projections, the NIS region is a net grain exporter (to countries beyond the region) of about 7 mmt by 2012. Under more optimistic productivity growth assumptions, NIS net grain exports could reach 18 mmt. Under either scenario, reform will have finally transformed the NIS region from a major grain importer into a grain exporter. AO

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Further Reading

Livestock Sectors in the Economies of Eastern Europe and the Former Soviet Union: Transition from Plan to Market and the Road Ahead, AER-798, ERS-USDA, February 2002. http://www.ers.usda.gov/publications/aer798/

Liefert, W., "Comparative (Dis?)Advantage in Russian Agriculture," *American Journal of Agricultural Economics*, forthcoming.

Changes in Agricultural Markets in Transition Economies, AER-806, ERS-USDA, February 2002. http://www.ers.usda.gov/publications/aer806/

Upcoming Reports—USDA's Economic Research Service

The following reports are issued electronically at 4 p.m. (ET) unless otherwise indicated.
www.ers.usda.gov

May

10 *World Agricultural Supply and Demand Estimates (8:30 a.m.)*
13 *Oil Crops Outlook***
*Cotton and Wool Outlook***
*Rice Outlook***
14 *Feed Outlook (9 a.m.)***
*Wheat Outlook (9 a.m.)***
15 *Livestock, Dairy, and Poultry Situation and Outlook***
20 *U.S. Agricultural Trade Update***
21 *Agricultural Outlook (3 p.m.)**
22 *Fruit and Tree Nuts Outlook***
23 *Sugar and Sweeteners Outlook**
24 *Floriculture and Environmental Horticulture Outlook and Yearbook***
30 *Sugar and Sweeteners Outlook***
31 *Outlook for U.S. Agricultural Trade***

**Release of summary.*
***Electronic newsletter.*

What's ahead in AO

- Russia in the WTO—A "What-If" Scenario
- The State of Cuba's Citrus Industry
- Africa Trade Opportunities

All in upcoming issues of *Agricultural Outlook*

USDA photo: Bill Tarpenning

Farmland Protection Programs: What Does the Public Want?

Public support has been growing for government farmland protection programs. Since the late 1980s, the extent of farmland enrolled in these programs has grown from tens of thousands of acres, largely in the Northeast, to nearly a million acres spread across 20 states. With the authorization of USDA's Farmland Protection Program (FPP)—intended to protect topsoil by limiting nonagricultural use of the land—the Federal government has become a partner in the effort to preserve agricultural land, distributing about $50 million since 1996 to a variety of state and local programs.

What explains the growing interest in farmland protection? At the root of support for these programs is the recognition that farmland produces more for society than food and fiber. In particular, farmland is an important source of rural amenities—a range of goods and services from opportunities for outdoor recreation, such as hunting and fishing, to the pleasures of viewing a pastoral scene on a Sunday drive. For some, rural amenities even include the satisfaction of simply knowing the agrarian way of life continues, whether or not they are able to view it.

Rural amenities rarely provide enough income to farmland owners to sway decisions concerning land use or development. Preserving rural amenities is sometimes approached through programs like farmland protection, which provide payments to landowners for maintaining their land in farms or ranches. Rural amenities, however, are not a uniform commodity. Farmland differs from place to place, providing varying levels of rural amenities. Moreover, preferences among the public for various rural amenities differ, and not all rural amenities may be best provided by farmland. While some amenities—like an agrarian cultural heritage—seem to require protection of farmland, others—like wildlife habitat—may be better provided by protecting nonagricultural rural lands such as forestlands and grasslands.

Designing and implementing a farmland protection program that is cost-effective and provides the greatest possible benefits requires an understanding of 1) public preferences for particular rural amenities, and 2) which of these amenities is best provided through farmland preservation. Since rural amenities generally have no price tags, it can be difficult to compare public preferences for one rural amenity or set of amenities over another, or to assess public willingness to spend on rural amenities over other projects. Some means of ascertaining public values for various amenities is therefore necessary for effective policy design.

Discovering Public Preferences For Rural Amenities

One approach is to ask people what characteristics they think farmland protection programs should preserve. A limited number of economic studies have taken this approach. These studies suggest that preserving amenities that are uniquely associated with active agriculture may not always be a dominant preference of the public. A variety of reasons for protecting farmland is given, ranging from environmental concerns and maintaining open space, to preservation of family farms and the protection of local food supplies. No single reason seems to dominate, although some reasons rise to the top in particular regions. For example, some studies indicate that environmental concerns rank highest in Rhode Island, while other studies suggest that protecting small- and medium-sized farms is most important in Colorado.

To further explore public preferences for rural amenities and their relationship to farmland preservation, USDA's Economic Research Service (ERS) examined the design and implementation of actual farmland and rural land preservation programs. Since these programs have already received taxpayer support, researchers expected that preferences of the public could be identified.

The study involved three lines of investigation:

- An analysis of the language in legislation authorizing farmland preservation programs in 48 states (excluding Alaska and Hawaii).

  Legislative intent, as revealed in statutory language, can indicate which rural amenities matter most to voters.

- An examination of ranking criteria in several state- and county-level Purchase of Development Rights (PDR) programs in several northeastern states.

  PDR program administrators use ranking systems to choose among easements offered for sale by

landowners. If these ranking schemes reflect the intent of program legislation and favor preserving certain parcel characteristics over others, then they can reveal which amenities are most preferred by the public.

- An examination of case studies of how farmland protection legislation fits into the broad array of state and local rural land conservation programs in these northeastern states.

  Because other rural land use programs may complement or substitute for farmland preservation programs, it is necessary to examine the full array of rural land conservation programs in a region to determine public preferences for rural amenities. If preferred amenities are also being provided through preservation of nonagricultural rural lands, preferences may not be fully revealed by focusing only on farmland protection.

Conclusions From the ERS Study

Although this empirical information is not conducive to definite conclusions on the values of different rural amenities, the ERS study provides a number of insights on how farmland preservation programs operate as a policy instrument for protecting rural amenities. Some of these insights suggest the kinds of amenities that seem to be most important, while others highlight concerns that affect the design and implementation of farmland protection policies.

State and local governments use farmland preservation programs to protect a large number of rural amenities. Analysis of the enabling legislation of farmland protection programs suggests that local food security, scenic beauty, and cultural heritage are primary concerns for the majority of states that have farmland preservation programs. However, the more densely populated regions are often concerned with protecting the widest variety of rural amenities, while less concern is evident in sparsely populated states and regions.

For example, the greatest interest in preserving rural amenities appears in the farmland protection legislation of states in the Northeast, Lake, and Pacific regions, while rural amenities are not mentioned in farmland protection legislation in North Dakota, Alabama, Mississippi, Oklahoma, Idaho, New Mexico, and Wyoming. In sparsely populated states, the continued relative abundance of rural amenities may make protective legislation seem unnecessary, whereas more densely populated states often have less remaining farmland, leading them to enact a broad portfolio of programs to protect many types of rural amenities.

What Rural Amenities Are Provided by Farmland?

Agrarian cultural heritage includes: knowing that the rural character of the land is being maintained, and knowing that farming as a way of life continues in your community.

Rural pleasantries include: walks in pastoral settings, scenic drives in the countryside, and visiting local farms.

Supporting rural communities includes: creating a diversified rural economy, and maintaining viable rural communities.

Recreational opportunities and environmental services include: fishing, swimming, birdwatching, biodiversity, watershed protection, and flood control.

Most farmland protection programs focus on maintaining agricultural viability. Most programs favor protecting actively farmed agricultural landscapes rather than merely preserving open space. For example, ranking criteria of state- and county-level PDR programs in several northeastern states place high priority on maintaining active agricultural operations, rather than passive or open space uses. The strong emphasis within PDR programs on active agriculture suggests that in the Northeast, public preferences are for amenities that are uniquely provided by agriculture. But, although active agriculture is the prime concern, it is not the sole concern. For example, many PDR programs require conservation plans, which help provide "water quality" amenities in the form of reduced soil erosion.

A tradeoff may exist between long-term provision of some rural amenities from farmland and achieving the best mix of rural amenities. Many PDR programs give priority to farms that are considered most likely to stay in agriculture. In practice, this usually means favoring high-quality soils and row-crop farming, since cropland operations (particularly those specializing in high-value commodities like fruits and vegetables) may be most likely to remain successful in the face of rising land values in urban fringe areas. If the public is interested in having a broader mix of farmlands preserved, then this focus on cropland suggests a tradeoff between providing the most desired mix of amenities today, and maximizing the long-term production of cropland-related rural amenities. Given the evidence from the enabling legislation, and evidence from survey data, the proper balance between "maximizing long-term viability" and "obtaining the best mix of preserved farmlands" is an open question.

The design of preservation programs has implications for the spatial pattern of permanently preserved lands, and hence the location of preserved rural amenities. The preservation programs reviewed generally target farms that face development pressure. Coupled with criteria favoring preservation of larger farms and blocks of farms, this suggests a preference for preserving parcels in clusters. While this outcome may be favored as a means of fostering long-term agricultural viability, it also has impacts on the distribution of rural amenities—favoring those amenities that are best produced in larger blocks of farmland.

However, other concerns likely lean toward distribution of preserved lands over a wide area. Some programs are specifically designed so that preservation funds are distributed across the jurisdiction. In others, the desire to preserve as much farmland as possible at least cost leads to prioritizing applications based on the lowest per-acre cost or on the largest

discount at which landowners offer to sell development rights. This can result in a more scattered pattern of preserved farms, or in preservation of lands distant from urban centers.

The scope of other rural land protection policies influences the extent to which farmland preservation programs can concentrate on protecting amenities that are not dependent on active agriculture. The results of several surveys reported in the literature (on attitudes toward farmland preservation) suggest that the rural amenities many government farmland preservation programs favor may not always be the same set desired by the public. However, given the broad array of rural land conservation programs in many states, it may be efficient for farmland protection programs to give priority to agriculturally related amenities, with other programs focusing on lands that provide other rural amenities. For example, Pennsylvania's PDR program coexists with a variety of other public and private rural land preservation programs, which have protected significant amounts of rural lands for public recreation purposes or to protect lands (such as battlefields) with historical significance. Massachusetts has a variety of public and private programs dedicated to the preservation of rural land uses, both by outright purchase and by purchase of easements (both on agricultural lands and on forestlands).

The Federal Role in Preserving Rural Amenities

Since the FPP was established in the 1996 Farm Act, the Federal government has been a partner in efforts to preserve rural amenities through protecting prime, unique, and other productive soils. Findings from the ERS study suggest several ways in which the Federal program might best interact with state and local programs.

Help coordinate the actions of state and local preservation agencies. The rural amenities protected by farmland preservation are often local in nature. However, farmland preservation and the loss of rural amenities are issues in nearly all major metropolitan areas across the nation. Americans like to travel, and many Americans move across state lines when changing residence. Thus, the preservation of rural amenities can be considered a "national" issue, and the Federal government has a role in representing the nation's interests in "local" rural amenities. Coordinating state preservation activities, encouraging states to coordinate county preservation efforts, and assisting with funding would constitute a useful Federal role. The draft 2002 farm bill (in conference) contained language to significantly increase Federal matching grants from a total of $50 million spent to date, to *annual* funding of $50-$500 million.

The Government's Role in Maintaining Rural Amenities

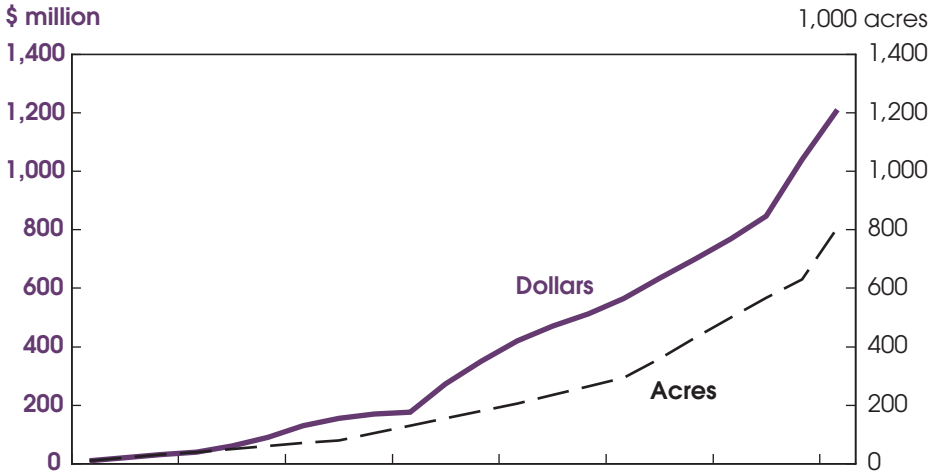
Because markets for rural amenities are limited, economic theory indicates that not enough of them will be produced. This occurs for two reasons:

1) Rural amenities are often a beneficial side effect that occurs in the production of a particular good. For example, a dairy farm may offer a pleasing pastoral landscape to sightseers as it provides forage for grazing cows.

2) For many rural amenities, it is difficult for the farmer to receive payment for providing the good. For example, although numerous sightseers can enjoy the dairy farm's beauty, the farmer cannot charge a price per view.

Farmers have little motivation to preserve rural amenities that earn them no profits, even if the benefits to the public of preserving rural amenities exceed what it would cost most farmers to produce them. Many farmers face this issue when confronted with nonagricultural development opportunities. Hence, rural amenities can be maintained through government support of farmland preservation programs by keeping more land in agriculture than market forces would provide.

Farmland Protection Expenditures and Acreage Covered



Source: American Farmland Trust.

Economic Research Service, USDA

Resources & Environment

Help balance the relative importance of rural amenities on privately owned farmland vs. recreational opportunities and amenities provided by publicly protected lands. These considerations can help establish Federal priorities for funding public park systems and farmland preservation programs, which may influence the distribution of funds between various rural land conservation programs.

Coordinate Federal transportation and infrastructure development activities with local preservation efforts. The Federal government should ascertain if its activities interfere with local preservation priorities. For example, the Federal government provides grants and loans to state and local governments to finance sewer and water investments through Section 201 Municipal Facilities Construction grants and the Rural Housing Service. While these are designed to address concerns over point-source water pollution and the safety of drinking water, an unintended consequence of financing facilities that are greatly oversized for the current population may be to promote growth and thus to facilitate the conversion of farmland to residential uses.

The set of rural amenities available to rural and urban residents alike is influenced by a large and complex network of policymakers from various levels of government and nongovernmental organizations, with farmland protection policies one of a wide array of amenity preservation tools. Though each entity acts largely independently, in aggregate they shape the nation's landscape. AO

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Find more information on the Economic Research Service website

Development at the Urban Fringe and Beyond: Impacts on Agriculture and Rural Land
www.ers.usda.gov/publications/aer803/

Agricultural Resources and Environmental Indicators, 2000,
Chapter 1.1: Land Use
www.ers.usda.gov/Emphases/Harmony/issues/arei2000/AREI1_1landuse.pdf

Major Uses of Land in the United States, 1997
www.ers.usda.gov/publications/sb973/

Special Article

China: En Route to a New Role in Global Agriculture

China's World Trade Organization (WTO) accession in December 2001, its new labeling regulations for bioengineered agricultural products, and questions about the actual size of its grain stocks are among the issues that have recently captured the attention of market analysts and policymakers. Potentially market-driving issues emanate from China on a regular basis, but beyond the headline-grabbing events is a larger picture of China's evolving role in agricultural markets.

As the 21st century opens, China stands ready to enlarge its role in global markets. After decades of political upheaval, poverty, and food shortages, China has emerged as one of the world's largest and fastest growing economies. Since the late 1970s, a historical tendency toward isolation and self-sufficiency has been replaced by an outward-looking reliance on foreign trade and investment as engines of economic growth. As its economy grows and develops, China will undergo unprecedented changes as it evolves from a largely rural, centrally planned, low-tech economy into one that is urbanized, and market- and consumer-driven.

China's potential as a market has long tantalized overseas merchants. While in some years it has been the world's largest customer for wheat, corn, cotton, and soybeans, its imports have fluctuated considerably, and the overall level of agricultural imports seems below potential.

Given a population of 1.27 billion (4.5 times that of the U.S.) and limited endowment of cropland (75 percent that of the U.S.) and of other natural resources, one would expect China to rely on agricultural imports from more land-abundant countries to feed its people. Agricultural imports have grown slowly, especially in comparison with surging trade in manufactured goods. The agricultural share of China's imports fell from about 33 percent in 1980 to about 7 percent in 1999. According to WTO statistics, China had a modest $2.9-billion deficit in agricultural trade in 2000 (agricultural imports minus agricultural exports), equivalent to about 1.3 percent of its $225-billion overall trade surplus.

Considerable potential exists for China to become a larger and steadier customer for agricultural imports as it sheds its inward orientation, opens its markets to the world, and rationalizes the use of its scarce resources by importing goods that can be grown more efficiently overseas. China's role in agricultural markets will be shaped by a number of factors, including:

- pace of development;
- shift from central planning to markets in guiding production and consumption decisions;
- development of markets and related infrastructure and institutions; and
- impacts of trade on China's farmers, impoverished regions, and other vulnerable sectors that could, in turn, affect its trade policy.

Dennis Shields

Farmers, agribusiness managers, and policymakers around the world will need to carefully watch the complex process of development in order to assess China's likely policy changes and their impacts on world markets for agricultural products. With a rapidly growing economy and WTO membership as the latest step in the march toward global integration, China is poised to becoming a larger market for imported agricultural products.

Changing Patterns of Consumption & Production

The Chinese economy is reportedly growing at a rapid 7 to 8 percent annually. While it is difficult to verify the accuracy of China's national income statistics, there have been rapid improvements in living standards and striking changes in consumption habits. Economic growth will boost Chinese consumer incomes, purchasing power, and demand for food. With slowing population growth (less than 1 percent annually) and rising per capita income (6 percent real annual growth in urban areas), food spending is growing (although at a slower rate than the rise in income).

The composition of food demand is also changing as demand for meat, poultry, fish, fresh fruit and vegetables, and other high-value products grows faster than for staples such as rice, wheat, and traditional vegetables. After decades of limited consumption choices, China's emerging middle class is acquiring a taste for convenience and high-value foods, such as instant noodles, baked goods, exotic fruits, dairy products, fast food, and processed foods.

The food processing and food retail sectors have grown and developed rapidly, reflecting increased demand for convenience and quality. Chinese consumers are dining in restaurants more

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frequently, traveling more, and starting to demand foods with specific attributes. Consumer awareness of environmental protection, food safety, and health issues is emerging in China, reflected in recently introduced "green food" and organic standards, and heightened concerns about sanitation in meat-packing plants.

A large, low-tech, labor-intensive farm sector currently supplies most of China's food needs, but whether it will be able to make needed adjustments in input use and product mix to meet the country's growing and shifting food needs is not yet clear. The Chinese farm sector encompasses over 200 million small-scale household operations using little machinery and 1 worker for every acre of cropland. By comparison, the U.S. has less than 2 million farms operating on a cropland base 25 percent larger, with over 140 acres of cropland for every farm worker. Most Chinese farmers grow rice, wheat, or corn on small plots of land; grow a cash crop such as cotton, rapeseed, peanuts, or tobacco; maintain a vegetable plot; and raise a few head of livestock or chickens.

This traditional semisubsistence production structure will give way to a more commercialized farm sector in order to supply China's growing and changing food needs. Production is shifting from food grains and basic vegetables toward meats, fish, fruits, refined vegetable oils, and processed foods. Emerging supermarket and restaurant chains require large quantities of standardized high-quality products, which are nearly impossible to procure from large numbers of small independent growers.

Meat production is one of the fastest changing components of China's agricultural sector. Already producing nearly half of the world's pork, China is also the world's second-largest poultry producer and third-largest beef producer. The livestock sector is expected to grow further to supply the country's growing demand for meat.

Traditionally, hogs and other livestock were produced in "backyard" operations, and fed with table scraps, waste, and aquatic plants. Today, production is shifting to larger, more commercialized operations using manufactured feeds. In 1985, traditional backyard production accounted for 95 percent of pork output, but that share is now down to 80 percent. A growing share of pork production is on household farms specializing in livestock (15 percent) and on commercial farm operations (5 percent). Foreign investors and other suppliers to fast-food restaurants, supermarkets, and export markets are contracting with large operations to procure poultry, meat animals, and dairy products.

Rapid growth and commercialization in China's livestock industry will boost demand for feed grains and oilseed meals. Increased feed grain and oilseed plantings will probably displace some food grains, and, in the long run, China may have to rely more heavily on imported corn and soybeans to feed its expanding numbers of livestock. Growing demand for protein meals is partly responsible for the dramatic rise in soybean imports from $75 million in 1995 to $2.8 billion in 2001. The USDA baseline projects a doubling of Chinese soybean imports to reach 30 million tons by 2011/12. Corn imports are projected to grow from current minimal levels to 7.8 million tons annually by 2011/12.

A Closer Look at China Issues

This article is based on a new ERS report, China's Food and Agriculture: Issues for the 21st Century, which delves more deeply into issues that could affect the evolving role of China in world agricultural markets. It covers issues related to food consumption, marketing and transportation, international trade, agricultural policy, regional differences, biotechnology, input markets, rural development, and market information. A series of 13 articles prepared by ERS economists teamed with colleagues in universities and other institutions in the U.S., Canada, and China provides background information, assesses the current state of knowledge, and asks key questions that can be addressed by research.

Specialized household and commercial livestock operations will probably supply most of China's growing demand for livestock products, but some analysts anticipate increased imports of meat. Other analysts argue that further commercialization of the livestock industry will make China competitive on international markets and that China may even become an exporter of meat products to Asian neighbors if food safety and sanitary requirements can be met.

The Evolving Role of Government

After several decades of central planning (from the 1950s through the 1970s), China now relies increasingly on the market to allocate resources following a series of policy and institutional reforms. Consumers, processors, and farmers make their own consumption and production decisions subject to market forces. In the early years of market reforms after 1978, Chinese farmers responded to price incentives by dramatically increasing production. Changes in market prices can have dramatic impacts on farmers' planting decisions and production. For example, strong cotton prices in 2000/01 boosted cotton acreage to record levels, while declining prices in 2002 are expected to reduce cotton plantings considerably.

Market development is still proceeding, and some market functions, such as specification and enforcement of grades and standards, have ample room for improvement. In recent years, millers have been seeking higher quality wheat to make breads and rolls for urban consumers. Farmers, however, have been encouraged to grow high-quality wheat varieties, but the supply of domestically produced high-quality wheat has not grown fast enough to keep up with demand. There is reportedly a high demand for imported high-protein wheat to meet domestic millers' demands.

Government policies and other institutions have yet to evolve fully. Farmers are free to sell their production on the market, and markets have arisen for this purpose. But some government bureaucracies cling to their planned-economy role. For example, high grain supply estimates from local governments are still

passed up to the provincial level and ultimately to Beijing, where they are used to assess supply/demand balance and prospects for imports and exports.

In a market economy, a government must provide supporting services such as reliable market information systems, transportation and market infrastructure, an agricultural finance system, and a modern legal system to clarify property rights, enforce contracts, and resolve disputes. Without the institutional infrastructure to provide these essential services, market development will lose momentum, and farmers' ability to take advantage of the international market opportunities will be limited.

Reduction of tariffs, quotas, and other border measures will have little impact on Chinese markets if imports are unable to penetrate market channels and reach consumers at competitive prices. Inefficient marketing systems can have the same trade-reducing effect as a tariff by adding to the cost of trade.

Lack of efficiency in China's marketing and distribution system reduces flows of both international and domestic interregional trade. Basic market infrastructure, including highways, railway track, storage, and refrigeration has grown dramatically over the past decade. However, lack of cold storage and port facilities still constrain both international and domestic trade. Marketing industries in China are relatively inefficient, with their markup accounting for more than 20 percent of the retail price of perishable products (much higher than in the U.S.). Marketing channels are often difficult to penetrate for foreign firms and for Chinese firms operating outside their home regions.

Trade Liberalization—How Liberal?

China's foreign trade has been liberalized considerably over the last two decades. But trade in a few strategic commodities, including imports of grains, cotton, tobacco, sugar, and fertilizer, remained tightly controlled through state trading enterprises (STEs), import and export licensing requirements, and unannounced import quotas prior to WTO accession.

Import and export decisions carried out by state trading monopolies were often guided by a policy of maintaining self-sufficiency in basic foodstuffs. Domestic stock levels—considered a state secret and not announced to the public—have often motivated government purchases or sales of commodities. Concern about dwindling stocks in the mid-1990s led to massive imports of wheat and corn in 1995 and 1996, while a subsequent buildup of stocks led to a plunge in grain imports from 1999 to 2001.

China's stocks make up a large share of global stocks. Lack of information about the actual level of these grain stocks has created uncertainty about the global grain stocks-to-use ratio, an indicator used by traders and other market analysts in assessing supply-demand conditions.

As a WTO member, China has made wide-ranging commitments designed to make its trade system more transparent and to increase the role of market forces (*AO* April 2002). However, there are concerns that regulatory requirements could restrict the number of companies eligible to participate in international trade, and will use technical barriers—such as new biotechnology labeling requirements—to limit imports.

Restrictions on agricultural imports may protect farmers' income and preserve grain self-sufficiency in the short run, but insulating farmers from international markets prevents them from receiving signals that would push China's product mix toward the most efficient use of resources. In particular, land-intensive grain production is not well suited to China's limited arable land base, especially production of irrigated wheat in north China, where water supplies are dwindling. In contrast, China's vegetables, fruits, livestock, and processing industries—activities that require a great deal of labor and little land—are cost-competitive not only in the domestic market but also overseas.

Input Markets: A Work in Progress

Transforming China's agriculture into a commercial production sector will require consolidation of small farm operations; release of agricultural labor to industrial and service employment; and investment in land improvements, machinery, and human capital. Input markets will play a key role in this transformation. Yet, while market forces now play a strong role in most of China's economy, markets for agricultural inputs are weak,

Comparing China and the U.S.

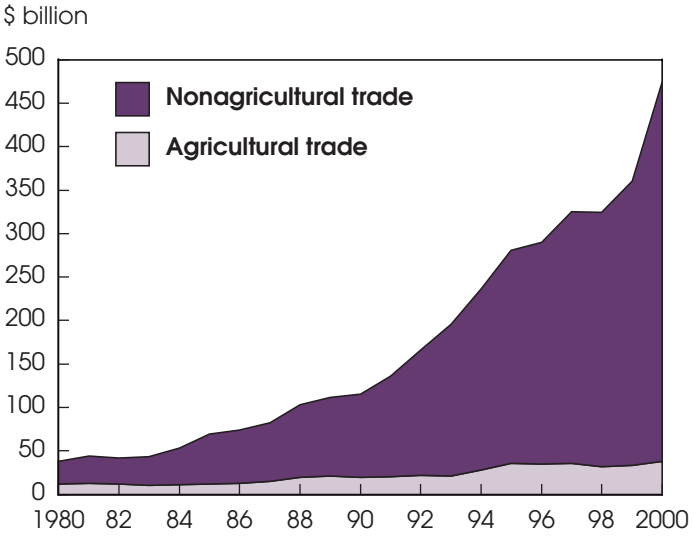
Item	Unit	China	U.S.	China-U.S. ratio
Population[1]	*Million*	1,266	282	4.5
Cropland area[2]	*Million acres*	320	431	0.74
Cropland per agricultural worker[3]	*Acres*	1	140	0.007
Value of agricultural production[4]	*$ billion*	257	195	1.32
Agricultural exports[5]	*$ billion*	16.4	70.9	0.23
World rank[5]	*Number*	9	1	
Agricultural imports[5]	*$ billion*	19.5	66.7	0.29
World rank[5]	*Number*	8	1	

1. From population censuses, 2000. 2. From agricultural censuses, 1997. (2.471 hectares = 1 acre.) U.S. is total cropland. China is cultivated land. 3. Computed by ERS. 4. Value of crop and livestock production, 2000. 5. World Trade Organization statistics, 2000. USDA agricultural products for calendar year 2000: imports $39 billion, exports $51.2 billion. WTO estimates include fish, synthetic crude rubber, cork and wood, pulp and waste paper.

Economic Research Service, USDA

Special Article

China's Agricultural Trade Growing



Agricultural trade equals trade in primary products minus mineral products.
Source: Calculated by ERS from China Customs Statistics.

Economic Research Service, USDA

highly regulated, or nonexistent. This is a serious bottleneck that could slow needed adjustments in the agricultural production sector.

Markets for land and water still retain features of China's collective agriculture period (roughly 1958-78). Rights to use farmland, owned collectively by villages, are allocated to households by village leaders. Land cannot be bought or sold by individual farmers and land rentals are relatively uncommon and mostly informal. Lack of land markets impedes the readjustment of land to its most efficient use.

Water is exploited as a commonly-owned resource, and its low marginal price leads to overuse. Despite low levels of water availability, irrigated agriculture has expanded rapidly in the North China Plain, where per capita water availability is only one-tenth the international average. The higher yields brought about by irrigation contributed to increases in grain production that have allowed China to maintain near self-sufficiency in grain, especially wheat. But this production level may not be sustainable as water supplies dwindle.

Capital investment in industry and infrastructure has been heavily concentrated in urban areas. Loans to farm households are available primarily through informal channels—from family members or savings clubs organized by village neighbors. Many farmers have invested in greenhouses, fish ponds, irrigation systems, and fruit orchards using financing from off-farm earnings and informal channels, and some villages have banded together to pool their land for industrialized agriculture, to dig wells, or to offer machinery services. Still, lack of rural credit greatly constrains investment in the agricultural sector.

One of the chief challenges facing policymakers is the task of promoting the flow of laborers from agricultural to nonagricultural work in order to raise rural per capita incomes. At least one third of rural laborers work at least part-time outside of farming, but greater transfer of labor to nonagricultural employment will be necessary to raise per capita rural incomes and commercialize the farm sector. Restrictions on rural migrants' movement to cities has limited the number of off-farm job opportunities available to rural residents, since nonfarm jobs tend to be concentrated in cities, especially in economically vibrant coastal regions. Low education limits job choices of rural residents, and poor access to markets and technology limits nonfarm job growth in rural areas.

Low investment in rural schooling and extension services is another case of urban investment bias that affects the movement of labor out of agriculture. Urban schools in China are subsidized by the government, but rural schools are financed by burdensome taxes and fees collected from village residents. As a result, rural schools are falling far behind their urban counterparts. A slowdown in the country's rural economy since 1998 has cut into tax revenue flowing from rural industries, making the problem more acute. Education, however, is key to lifting labor out of the low-technology agricultural sector and increasing the technological sophistication of agriculture itself. Lack of an effective rural education system hinders the movement of labor out of agriculture and slows the rise in agricultural labor productivity.

China as Customer & Competitor

As China grows, develops, and integrates with the world economy, it is likely to become an even larger and steadier customer for agricultural imports. Imports of grains and oilseeds will allow the country to feed itself without overburdening its limited natural resource endowment. Consumers growing demand for convenience and quality foods is likely to be satisfied largely through domestic production with some imports. At the same time, China could become a competitive exporter of fruits, vegetables, fish, meat, and poultry if its production were modernized, its marketing infrastructure improved, and food safety and animal health issues resolved.

Willingness to rely on markets to allocate resources will influence China's development and its role in world agricultural markets. Chinese policymakers seem committed to market reliance, and many now accept the logic of comparative advantage.

Despite China's commitment to trade liberalization, there is potential for nontariff barriers and regulatory requirements to periodically restrict imports and slow entry of foreign firms in order to balance competing interests within the country. However, China seems to be firmly on the path to market reliance and integration with the world economy, a path that will lead to greater world trade and more efficient use of global resources.
AO

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Statistical Indicators

Summary Data

Table 1—Key Statistical Indicators of the Food & Fiber Sector

	Annual			2001			2002			
	2000	2001	2002	II	III	IV	I	II	III	IV
Prices received by farmers (1990-92=100)	96	102	100	107	107	95	--	--	--	--
Livestock & products	97	106	97	110	111	100	--	--	--	--
Crops	96	99	104	104	104	91	--	--	--	--
Prices paid by farmers (1990-92=100)										
Production items	116	120	117	120	120	118	--	--	--	--
Commodities and services, interest, taxes, and wage rates (PPITW)	120	123	122	124	123	122	--	--	--	--
Cash receipts ($ bil.)	194	206	--	46	52	60	--	--	--	--
Livestock	99	109	--	27	28	27	--	--	--	--
Crops	94	97	--	19	24	32	--	--	--	--
Market basket (1982-84=100)										
Retail cost	171	177	--	177	178	179	--	--	--	--
Farm value	97	106	--	106	110	108	--	--	--	--
Spread	210	215	--	215	215	217	--	--	--	--
Farm value/retail cost (%)	20	21	--	21	22	21	--	--	--	--
Retail prices (1982-84=100)										
All food	168	173	178	173	174	175	177	177	178	179
At home	168	173	178	173	174	175	177	177	178	179
Away from home	169	174	178	173	175	176	177	178	179	180
Agricultural exports ($ bil.) [1]	50.8	52.8	54.5	12.5	12.3	15.2	14.0	12.9	12.6	--
Agricultural imports ($ bil.) [1]	38.9	39.0	40.0	10.0	9.4	10.0	9.9	9.7	10.4	--
Commercial production										
Red meat (mil. lb.)	46,150	45,663	45,771	11,148	11,371	12,048	11,256	11,238	11,597	11,680
Poultry (mil. lb.)	36,427	37,343	38,180	9,501	9,406	9,444	9,355	9,730	9,550	9,545
Eggs (mil. doz.)	7,034	7,144	7,195	1,778	1,788	1,828	1,765	1,785	1,800	1,845
Milk (bil. lb.)	167.6	165.3	169.4	42.7	40.6	40.8	42.2	43.8	41.7	41.8
Consumption, per capita										
Red meat and poultry (lb.)	214.7	211.4	213.1	52.1	53.2	54.4	52.0	53.3	53.4	54.4
Corn beginning stocks (mil. bu.) [2]	1,717.5	1,899.1	--	6,043.0	3,924.0	1,899.1	8,264.7	--	--	--
Corn use (mil. bu.) [2]	9,740.3	9,795.0	--	2,122.2	2,026.3	3,143.7	2,470.2	--	--	--
Prices [3]										
Choice steers--Neb. Direct ($/cwt)	69.65	72.71	72-75	76.41	70.19	65.13	70.19	72-74	71-77	73-79
Barrows and gilts--IA, So. MN ($/cwt)	44.70	45.81	39-41	52.05	51.05	37.30	39.43	41-43	41-43	35-37
Broilers--12-city (cents/lb.)	56.20	59.10	56-59	59.20	61.10	58.50	56.00	56-58	58-62	56-60
Eggs--NY gr. A large (cents/doz.)	68.90	67.20	63-67	63.30	61.40	68.20	69.10	57-59	58-62	70-76
Milk--all at plant ($/cwt)	12.33	14.93	12.70-13.20	15.30	16.53	14.50	13.07	12.10-12.50	12.30-13.00	13.30-14.30
Wheat--KC HRW ordinary ($/bu.)	3.08	3.33	--	3.41	3.18	3.30	3.26	--	--	--
Corn--Chicago ($/bu.)	1.97	2.03	--	1.96	2.10	2.01	2.06	--	--	--
Soybeans--Chicago ($/bu.)	4.86	4.58	--	4.48	4.89	4.45	--	--	--	--
Cotton--avg. spot 41-34 (cents/lb)	57.47	39.68	--	39.86	35.58	30.62	32.32	--	--	--
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Farm real estate values [4]										
Nominal ($ per acre)	713	740	798	844	887	926	974	1,020	1,080	1,130
Real (1996 $)	795	806	848	879	904	926	955	988	1,031	1,057
U.S. civilian employment (mil.) [5]	128.1	129.2	131.1	132.3	133.9	136.3	137.7	139.4	140.9	--
Food and fiber (mil.)	23.1	23.5	24.1	24.5	24.2	24.1	24.2	24.4	24.1	--
Farm sector (mil.)	1.9	1.8	1.9	2.0	2.0	1.9	1.8	1.8	1.7	--
U.S. gross domestic product ($ bil.)	6,318.9	6,642.3	7,054.3	7,400.5	7,813.2	8,318.4	8,781.5	9,268.6	9,872.9	--
Food and fiber--net value added ($ bil.)	924.8	957.6	1,026.6	1,048.2	1,078.9	1,101.9	1,132.7	1,180.6	1,264.5	--
Farm sector--net value added ($ bil.) [6]	75.5	70.2	77.8	73.5	85.7	82.6	74.0	66.9	82.0	--

-- = Not available. Annual and quarterly data for the most recent year contain forecasts. 1. Annual data based on Oct.-Sep. fiscal years ending with year indicated. 2. Sep.-Nov. first quarter; Dec.-Feb. second quarter; Mar.-May third quarter; Jun.-Aug. fourth quarter; Sep.-Aug. annual. Use includes exports and domestic disappearance. 3. Simple averages, Jan.-Dec. 4. As of January 1. 5. Civilian labor force taken from "Monthly Labor Review," Table 18--Annual Data: Employment Status of the Population, Bureau of Labor Statistics, U.S. Department of Labor. 6. The value-added data presented here are consistent with accounting conventions of the National Income and Product Accounts, U.S. Department of Commerce.

U.S. & Foreign Economic Data

Table 2—U.S. Gross Domestic Product & Related Data

	Annual			2000			2001			
	1999	2000	2001	II	III	IV	I	II	III	IV
	Billions of current dollars (quarterly data seasonally adjusted at annual rates)									
Gross Domestic Product	9,268.6	9,872.9	10,208.1	9,857.6	9,937.5	10,027.9	10,141.7	10,202.6	10,224.9	10,263.3
Gross National Product	9,261.8	9,860.8	10,202.8	9,841.0	9,919.4	10,032.1	10,131.3	10,190.9	10,213.8	10,275.3
Personal consumption expenditures	6,250.2	6,728.4	7,064.5	6,674.9	6,785.5	6,871.4	6,977.6	7,044.6	7,057.6	7,178.2
Durable goods	760.9	819.6	858.3	813.8	825.4	818.7	838.1	844.7	840.6	909.8
Nondurable goods	1,831.3	1,989.6	2,055.1	1,978.3	2,012.4	2,025.1	2,047.1	2,062.3	2,057.5	2,053.5
Food	899.8	957.5	991.6	953.5	967.2	971.4	982.0	987.0	993.5	1,003.9
Clothing and shoes	300.9	319.1	322.2	317.0	321.6	323.5	325.7	322.4	318.5	322.1
Services	3,658.0	3,919.2	4,151.1	3,882.8	3,947.7	4,027.5	4,092.4	4,137.6	4,159.4	4,214.9
Gross private domestic investment	1,636.7	1,767.5	1,633.9	1,792.4	1,788.4	1,780.3	1,722.8	1,669.9	1,624.8	1,518.2
Fixed investment	1,578.2	1,718.1	1,692.4	1,717.0	1,735.9	1,741.6	1,748.3	1,706.5	1,682.6	1,632.1
Change in private inventories	58.6	49.4	-58.4	75.4	85.5	38.7	-25.5	-36.6	-57.8	-113.9
Net exports of goods and services	-250.9	-364.0	-329.8	-350.8	-380.6	-390.6	-363.8	-347.4	-294.4	-313.5
Government consumption expenditures and gross investment	1,632.5	1,741.0	1,839.5	1,741.1	1,744.2	1,766.8	1,805.2	1,835.4	1,836.9	1,880.4
	Billions of 1996 dollars (quarterly data seasonally adjusted at annual rates)[1]									
Gross Domestic Product	8,856.5	9,224.0	9,333.8	9,229.4	9,260.1	9,303.9	9,334.5	9,341.7	9,310.4	9,348.6
Gross National Product	8,853.0	9,216.4	9,333.6	9,217.7	9,247.2	9,311.7	9,329.1	9,335.5	9,304.9	9,364.7
Personal consumption expenditures	5,968.4	6,257.8	6,450.3	6,226.3	6,292.1	6,341.1	6,388.5	6,428.4	6,443.9	6,540.3
Durable goods	817.8	895.5	955.6	886.5	904.1	899.4	922.4	938.1	940.2	1,021.7
Nondurable goods	1,766.4	1,849.9	1,883.3	1,844.9	1,864.1	1,866.8	1,878.0	1,879.4	1,882.0	1,893.6
Food	847.8	881.3	886.2	881.5	886.2	886.4	887.3	886.1	883.8	887.6
Clothing and shoes	312.1	335.3	345.2	333.3	339.8	339.9	342.7	344.1	344.7	349.3
Services	3,393.2	3,527.7	3,633.4	3,509.6	3,540.2	3,588.8	3,605.1	3,629.8	3,640.4	3,658.2
Gross private domestic investment	1,660.1	1,772.9	1,630.8	1,801.6	1,788.8	1,778.3	1,721.0	1,666.2	1,620.5	1,515.5
Fixed investment	1,595.4	1,716.2	1,682.6	1,719.2	1,730.1	1,732.1	1,740.3	1,696.4	1,671.6	1,621.9
Change in private inventories	62.1	50.6	-61.7	78.9	51.7	42.8	-27.1	-38.3	-61.9	-119.3
Net exports of goods and services	-316.9	-399.1	-408.7	-392.8	-411.2	-421.1	-404.5	-406.7	-411.0	-412.7
Government consumption expenditures and gross investment	1,531.8	1,572.6	1,628.6	1,577.2	1,570.0	1,582.8	1,603.4	1,623.0	1,624.1	1,663.9
GDP implicit price deflator (% change)	1.4	2.3	2.2	2.2	1.9	1.8	3.3	2.1	2.2	-0.1
Disposable personal income ($ bil.)	6,618.0	7,031.0	7,417.3	6,993.7	7,081.3	7,189.8	7,295.0	7,363.2	7,576.4	7,434.5
Disposable pers. income (1996 $ bil.)	6,320.0	6,539.2	6,772.4	6,523.7	6,566.5	6,634.9	6,679.0	6,719.2	6,917.5	6,773.8
Per capita disposable pers. income ($)	23,708	24,889	25,943	24,801	25,029	25,331	25,634	25,798	26,457	25,880
Per capita disp. pers. income (1996 $)	22,641	23,148	23,687	23,134	23,209	23,376	23,470	23,541	24,157	23,580
U.S. resident population plus Armed Forces overseas (mil.)[2]	272.9	275.4	--	275.0	275.6	276.3	--	--	--	--
Civilian population (mil.)[2]	271.5	273.9	--	273.5	274.2	274.9	--	--	--	--

	Annual			2001					2002	
	1999	2000	2001	Feb	Sep	Oct	Nov	Dec	Jan	Feb
	Monthly data seasonally adjusted									
Total industrial production (1992=100)	144.7	151.6	144.8	148.4	142.9	142.1	142.0	141.5	141.9	142.3
Leading economic indicators (1996=100)	108.8	109.9	109.5	108.9	109.1	109.3	110.3	111.5	112.2	112.2
Civilian employment (mil. persons)	133.5	135.2	135.1	135.7	135.0	134.6	134.3	134.1	133.5	134.3
Civilian unemployment rate (%)	4.2	4.0	4.8	4.2	5.0	5.4	5.6	5.8	5.6	5.5
Personal income ($ bil. annual rate)	7,777.3	8,319.2	8,723.5	8,640.2	8,771.0	8,759.6	8,757.2	8,784.8	8,829.5	8,879.4
Money stock-M2 (daily avg.) ($ bil.)[3]	4,655.0	4,942.3	5,463.2	5,025.7	5,388.1	5,377.6	5,421.3	5,463.2	5,473.4	5,503.2
Three-month Treasury bill rate (%)	4.66	5.85	3.45	4.93	2.87	2.22	1.93	1.72	1.66	1.73
AAA corporate bond yield (Moody's) (%)	7.04	7.62	7.08	7.10	7.17	7.03	6.97	6.76	6.55	6.51
Total housing starts (1,000)[4]	1,640.9	1,568.7	1,602.7	1,623	1,585	1,518	1,616	1,602	1,721	1,769
Business inventory/sales ratio[5 6]	1.41	1.40	1.42	1.43	1.45	1.39	1.39	1.39	1.38	--
Retail & food services sales ($ bil.)[6 7]	3,149.2	3,388.8	3,504.2	288.0	286.4	304.7	295.9	296.6	296.1	296.7
Food and beverage stores ($ bil.)	441.4	465.3	481.1	39.8	40.4	40.5	40.7	40.8	40.9	40.9
Clothing & accessory stores ($ bil.)	159.7	168.5	169.7	14.5	13.3	14.0	14.0	14.4	14.7	14.8
Food services & drinking places ($ bil.)	286.3	306.1	321.0	26.2	26.4	26.7	27.0	28.4	27.6	27.7

-- = Not available. 1. In October 1999, 1996 dollars replaced 1992 dollars. 2. Population estimates based on 1990 census. 3. Annual data as of December of year listed. 4. Private, including farm. 5. Manufacturing and trade. 6. In July 2001, all numbers were revised due to a changeover from the Standard Industrial Classification System to the North American Industry Classification System. 7. Annual total.

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Table 3—World Economic Growth

	Calendar year									
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	Real GDP, annual percent change									
World	3.1	2.8	3.5	3.4	1.9	2.8	3.9	1.4	1.8	3.3
less U.S.	2.7	2.8	3.4	3.0	1.0	2.3	3.8	1.4	1.4	3.3
Developed economies	2.7	2.3	3.1	3.0	2.1	2.6	3.4	1.1	1.4	2.6
less U.S.	2.1	2.2	2.8	2.3	1.0	1.9	3.0	1.0	0.6	2.4
United States	4.0	2.7	3.6	4.4	4.3	4.1	4.1	1.2	2.7	3.1
Canada	4.7	2.7	1.5	4.4	3.3	4.6	4.3	1.5	2.6	3.1
Japan	0.6	1.5	5.1	1.6	-2.5	0.2	2.2	-0.4	-1.7	1.0
Australia	4.5	4.5	3.8	4.7	4.5	4.4	2.0	2.4	3.2	3.7
European Union	2.7	2.5	1.6	2.5	2.8	2.6	3.5	1.6	1.5	3.0
Transition economies	-8.1	-1.3	-0.8	1.4	-1.4	3.4	6.2	4.5	3.5	4.0
Eastern Europe	3.9	5.6	4.0	2.7	2.6	2.4	3.8	2.7	2.5	4.4
Poland	5.2	7.0	6.0	6.8	4.8	4.1	4.2	1.1	1.1	4.1
Former Soviet Union	-14.1	-5.4	-4.0	0.5	-4.4	4.2	8.1	5.9	4.1	3.7
Russia	-12.6	-4.1	-3.4	0.9	-4.9	5.0	8.3	5.1	3.8	3.6
Developing economies	6.3	5.3	5.8	5.3	1.2	3.4	5.7	2.3	3.2	5.7
Asia	8.8	8.3	7.4	5.8	0.4	6.3	7.2	3.7	4.7	6.3
East Asia	9.7	8.7	7.7	7.0	1.9	7.4	8.3	4.1	5.2	6.6
China	12.8	10.5	9.6	8.8	7.8	7.1	8.0	7.5	7.1	7.9
Taiwan	7.1	6.4	6.1	6.7	4.6	5.4	5.9	-1.9	1.9	4.0
Korea	8.2	8.9	6.8	5.0	-6.7	10.7	9.5	3.0	4.7	5.6
Southeast Asia	8.3	8.3	7.3	4.0	-7.5	3.5	6.1	1.8	3.1	6.0
Indonesia	7.5	8.2	7.8	4.7	-13.2	0.7	4.8	3.3	3.2	6.8
Malaysia	9.2	9.8	10.0	7.3	-7.4	5.8	8.4	0.5	3.0	5.8
Philippines	4.4	4.7	5.8	5.2	-0.8	3.2	4.0	3.4	3.8	4.1
Thailand	9.0	8.9	5.9	-1.7	-10.2	4.2	4.7	1.8	2.6	5.0
South Asia	6.6	7.1	6.3	4.2	6.1	6.1	4.6	4.6	5.2	5.7
India	7.3	7.7	7.0	4.6	6.8	6.5	4.8	4.9	5.5	5.8
Pakistan	3.9	5.1	3.9	1.0	2.5	4.0	3.4	2.6	3.2	5.0
Latin America	5.3	1.4	3.7	5.2	1.8	0.0	3.8	0.4	0.4	5.4
Mexico	4.4	-6.2	5.2	6.8	4.9	3.5	6.9	-0.3	1.5	5.8
Caribbean/Central	4.1	3.8	3.6	6.4	6.8	6.9	4.9	1.5	2.6	6.1
South America	5.6	3.1	3.3	4.8	1.0	-1.1	3.0	0.6	0.0	5.2
Argentina	5.8	-2.8	5.5	8.1	3.9	-3.2	-0.4	-4.1	-9.1	5.3
Brazil	5.9	4.2	2.8	3.2	-0.1	0.8	3.9	1.5	1.9	5.4
Colombia	5.8	5.2	2.1	3.4	0.5	-4.3	2.2	1.5	2.5	5.9
Venezuela	-2.3	3.7	-0.5	6.5	-0.7	-6.1	3.2	4.9	2.7	3.0
Middle East	-0.3	4.4	4.7	4.4	2.7	-0.8	5.0	-0.9	2.3	4.4
Israel	6.9	7.0	5.1	3.2	2.6	2.2	5.9	-0.6	3.2	4.8
Saudi Arabia	0.5	0.5	1.4	1.9	2.3	-1.1	3.5	3.0	2.5	2.3
Turkey	-5.5	7.2	7.0	7.5	3.1	-4.7	7.2	-7.1	1.2	6.7
Africa	3.2	2.9	5.2	2.8	3.1	2.6	3.8	3.5	3.2	3.7
North Africa	3.9	1.5	6.5	2.6	5.6	3.9	4.0	4.4	4.1	3.8
Egypt	3.9	4.7	5.0	5.5	5.6	6.0	5.2	3.3	4.2	4.3
Sub-Sahara	2.6	3.9	4.3	3.0	1.3	1.7	3.5	2.7	2.6	3.6
South Africa	3.2	3.1	4.2	2.5	0.6	1.2	3.4	2.2	2.0	3.5
	Consumer prices, annual percent change									
Developed economies	3.1	2.6	2.6	2.4	2.1	1.5	1.4	2.3	2.4	1.7
Transition economies	635.8	274.2	133.8	42.5	27.3	21.8	43.9	20.0	16.4	10.7
Developing economies	49.2	55.3	23.2	15.4	9.9	10.5	6.8	6.0	5.9	5.1
Asia	10.8	16.0	13.2	8.3	4.8	7.7	2.5	1.9	2.8	3.3
Latin America	194.6	200.3	36.0	21.2	12.9	9.9	8.8	8.1	6.2	4.9
Middle East	29.4	37.3	39.1	29.6	27.7	27.6	23.2	19.2	18.9	14.5
Africa	39.0	54.7	35.3	30.2	14.2	10.8	11.5	13.6	12.6	8.0

The last 3 years are either estimates or forecasts. Sources: Oxford Economic Forecasting; International Financial Statistics, IMF.

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Farm Prices

Table 4—Indexes of Prices Received & Paid by Farmers, U.S. Average

	Annual			2001				2002		
	1999	2000	2001	Mar	Oct	Nov	Dec	Jan	Feb	Mar
					1990-92=100					
Prices received										
All farm products	95	96	102	104	94	93	95	95	99	106
All crops	96	96	99	99	88	88	95	93	101	117
Food grains	91	85	91	92	90	88	91	88	84	84
Feed grains and hay	86	86	91	91	86	86	92	90	91	91
Cotton	85	82	65	68	57	49	53	48	47	47
Tobacco	102	107	107	99	109	114	113	111	108	80
Oil-bearing crops	83	85	80	78	74	77	78	76	76	79
Fruit and nuts, all	111	99	106	95	120	108	92	84	85	99
Commercial vegetables	110	123	130	138	101	101	149	162	191	269
Potatoes and dry beans	100	93	102	93	93	106	116	117	132	142
Livestock and products	95	97	106	108	104	99	96	97	97	96
Meat animals	83	94	97	103	91	86	85	90	93	93
Dairy products	110	94	114	106	120	110	103	103	100	97
Poultry and eggs	110	107	116	119	121	117	109	109	100	101
Prices paid										
Commodities and services, interest, taxes, and wage rates (PPITW)	115	120	123	124	123	122	122	122	122	122
Production items	111	116	120	120	118	117	117	117	117	116
Feed	100	102	108	106	109	108	108	107	106	105
Livestock and poultry	95	110	111	109	113	107	110	109	110	106
Seeds	121	124	132	125	134	134	134	134	134	134
Fertilizer	105	110	122	140	109	107	104	105	104	103
Agricultural chemicals	121	120	121	121	121	123	122	122	121	121
Fuels	93	134	118	123	103	98	77	82	84	88
Supplies and repairs	121	124	128	126	129	129	129	128	128	128
Autos and trucks	119	119	118	119	117	119	119	118	117	115
Farm machinery	135	139	142	142	141	141	141	141	141	142
Building material	120	121	121	121	121	121	121	121	121	121
Farm services	116	119	121	120	120	120	120	120	120	120
Rent	113	110	117	117	116	116	117	120	120	120
Interest payable per acre on farm real estate debt	106	112	114	114	116	116	114	109	109	109
Taxes payable per acre on farm real estate	120	123	124	124	123	123	124	126	126	126
Wage rates (seasonally adjusted)	135	140	146	150	148	148	148	148	155	155
Prod. items, interest, taxes & wage rates (PITW)	113	118	122	122	121	120	119	120	120	119
Ratio, prices received to prices paid (%)*	83	81	83	84	76	76	78	78	81	87
Prices received (1910-14=100)	605	612	649	658	598	591	605	605	628	672
Prices paid, etc. (1910-14=100)	1,531	1,594	1,643	1,648	1,635	1,627	1,618	1,619	1,624	1,620
Parity ratio (1910-14=100) (%)*	40	39	40	40	37	36	37	37	39	41

Values for the two most recent months are revised or preliminary. *Ratio of index of prices received for all farm products to index of prices paid for commodities and services, interest, taxes, and wage rates. Ratio uses the most recent prices paid index.

Data for this table are taken from the publication *Agricultural Prices*, which is produced monthly by USDA's National Agricultural Statistics Service (NASS) and is available at http://usda.mannlib.cornell.edu/reports/nassr/price/pap-bb/. For historical data or for categories not listed here, call the NASS Information Hotline at 1-800-727-9540, or access the NASS Home Page at http://www.usda.gov/nass.

Table 5—Prices Received by Farmers, U.S. Average

	Annual[1]			2001				2002		
	1998	1999	2000	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Crops										
All wheat ($/bu.)	2.65	2.48	2.65	2.87	2.86	2.88	2.89	2.87	2.83	2.81
Rice, rough ($/cwt)	8.89	5.93	5.75	5.66	4.36	4.08	4.07	3.94	4.10	4.06
Corn ($/bu.)	1.94	1.82	1.85	1.96	1.84	1.85	1.98	1.97	1.93	1.92
Sorghum ($/cwt)	2.97	2.80	3.15	3.29	3.30	3.29	3.26	3.34	3.26	3.29
All hay, baled ($/ton)	84.60	76.90	83.00	90.10	99.40	97.10	93.70	93.00	90.40	91.40
Soybeans ($/bu.)	4.93	4.63	4.75	4.39	4.09	4.16	4.20	4.22	4.21	4.39
Cotton, upland (¢/lb.)	60.20	45.00	56.00	41.10	34.50	29.50	32.20	28.90	28.70	28.40
Potatoes ($/cwt)	5.56	5.77	4.95	5.12	5.28	5.97	6.85	6.90	7.60	8.29
Lettuce ($/cwt)[2]	16.10	13.30	17.50	15.00	11.30	11.20	28.60	26.20	44.10	86.50
Tomatoes, fresh ($/cwt)[2]	35.20	25.80	31.40	56.50	28.80	28.90	25.00	40.50	26.60	36.90
Onions ($/cwt)	13.80	9.78	11.40	15.60	10.40	9.91	9.42	9.48	8.27	6.80
Beans, dry edible ($/cwt)	19.00	16.40	15.30	14.90	19.20	22.10	21.40	21.10	26.20	26.90
Apples for fresh use (¢/lb.)	17.30	21.30	17.90	14.60	24.20	23.30	22.40	21.70	21.40	21.00
Pears for fresh use ($/ton)	291.00	294.00	264.00	296.00	413.00	350.00	342.00	282.00	276.00	267.00
Oranges, all uses ($/box)[3]	4.29	5.54	--	4.54	5.12	3.19	3.44	3.89	4.42	4.88
Grapefruit, all uses ($/box)[3]	2.00	3.27	--	1.66	5.29	3.06	2.30	1.98	1.70	1.23
Livestock										
Cattle, all beef ($/cwt)	59.60	63.40	68.60	76.00	66.60	63.90	64.60	67.10	69.90	71.60
Calves ($/cwt)	78.80	87.70	104.00	112.00	99.20	96.40	100.00	102.00	105.00	104.00
Hogs, all ($/cwt)	34.40	30.30	42.30	45.90	40.50	35.00	33.30	37.70	38.50	36.30
Lambs ($/cwt)	72.30	74.50	79.40	84.00	52.90	54.10	61.70	65.50	67.40	--
All milk, sold to plants ($/cwt)	15.46	14.38	12.40	13.90	15.70	14.40	13.40	13.40	13.10	12.70
Milk, manuf. grade ($/cwt)	14.24	12.84	10.54	12.20	14.80	12.40	12.50	12.40	12.00	11.30
Broilers, live (¢/lb.)	39.30	37.10	33.60	40.00	41.00	39.00	37.00	37.00	34.00	32.00
Eggs, all (¢/doz.)[4]	66.80	62.20	61.80	69.10	62.60	65.80	59.00	62.30	55.90	68.50
Turkeys (¢/lb.)	38.00	40.80	40.70	37.10	44.00	44.30	38.50	34.10	34.10	32.90

-- = Not available.

Values for the two most recent months are revised or preliminary. 1. Season-average price by crop year for crops. Calendar year average of monthly prices for livestock. 2. Excludes Hawaii. 3. Equivalent on-tree returns. 4. Average of all eggs sold by producers including hatching eggs and eggs sold at retail.

Data for this table are taken from the publication *Agricultural Prices,* which is produced monthly by USDA's National Agricultural Statistics Service (NASS) and is available at http://usda.mannlib.cornell.edu/reports/nassr/price/pap-bb/. For historical data or for categories not listed here, call the NASS Information Hotline at 1-800-727-9540, or access the NASS Home Page at http://www.usda.gov/nass.

Producer & Consumer Prices

Table 6—Consumer Price Indexes for All Urban Consumers, U.S. Average (not seasonally adjusted)

	Annual			2001				2002		
	1999	2000	2001	Mar	Oct	Nov	Dec	Jan	Feb	Mar
					1982-84=100					
Consumer Price Index, all items	166.6	172.1	177.1	176.2	177.7	177.4	176.7	177.1	177.8	178.8
CPI, all items less food	167.0	172.9	177.8	177.1	178.2	177.8	177.0	177.4	178.2	179.2
All food	164.1	167.8	173.1	171.7	174.9	174.6	174.7	175.8	175.9	176.1
Food away from home	165.1	169.0	173.9	172.3	175.6	175.8	176.0	176.4	177.0	177.1
Food at home	164.2	167.9	173.4	172.0	175.2	174.7	174.7	176.2	176.0	176.3
Meats [1]	142.3	150.7	159.3	157.9	161.8	161.2	160.0	160.0	159.9	161.3
Beef and veal	139.2	148.1	160.5	160.1	161.0	161.0	160.2	159.7	160.7	161.8
Pork	145.9	156.5	162.4	159.4	167.2	164.7	163.0	163.7	163.3	163.2
Poultry	157.9	159.8	164.9	162.6	169.6	166.4	167.7	166.8	167.8	168.0
Fish and seafood	185.3	190.4	191.1	190.7	189.5	189.2	189.4	189.2	186.0	185.6
Eggs	128.1	131.9	136.4	139.2	132.3	138.4	133.5	138.4	138.6	141.0
Dairy and related products [2]	159.6	160.7	167.1	163.2	170.8	171.2	170.8	169.9	170.1	169.4
Fats and oils [3]	148.3	147.4	155.7	153.1	159.5	155.6	156.9	158.3	157.2	156.4
Fresh fruits	266.3	258.3	265.1	257.3	268.7	268.6	270.7	276.4	263.5	265.5
Fresh vegetables	209.3	219.4	230.6	238.2	229.1	228.6	230.4	251.6	258.1	265.3
Potatoes	193.1	196.3	202.3	189.3	216.3	203.4	205.2	213.4	225.7	230.2
Cereals and bakery products	185.0	188.3	193.8	191.9	195.2	194.9	195.3	196.7	197.6	197.0
Sugar and sweets	152.3	154.0	155.7	155.7	156.4	154.9	156.1	158.4	158.5	157.2
Nonalcoholic beverages [4]	134.3	137.8	139.2	139.5	139.9	139.5	138.5	139.5	140.0	140.1
Apparel										
Footwear	125.7	123.8	123.0	125.2	124.9	123.7	120.6	117.1	119.5	123.5
Tobacco and smoking products	355.8	394.9	425.2	407.7	429.9	446.7	431.7	432.8	449.3	433.4
Alcoholic beverages	169.7	174.7	179.3	177.8	180.8	181.2	180.9	181.8	182.6	182.5

1. Beef, veal, lamb, pork, and processed meat. 2. Included butter through December 1997. 3. Includes butter as of January 1998.
4. Includes fruit juices as of January 1998.
This table is compiled with data provided by the Bureau of Labor Statistics (BLS). BLS operates a website at http://www.bls.gov and a Consumer Prices Information Hotline at (202) 691-7000.

Table 7—Producer Price Indexes, U.S. Average (not seasonally adjusted)

	Annual			2001				2002		
	1998	1999	2000	Mar	Oct	Nov	Dec	Jan	Feb	Mar
					1982=100					
All commodities	124.4	125.5	132.7	135.9	130.3	129.8	128.0	128.5	128.6	129.9
Finished goods [1]	130.6	133.0	138.0	140.9	139.7	138.3	137.2	137.5	137.7	138.9
All foods [2]	132.4	132.2	133.0	136.8	138.2	136.3	136.1	136.7	138.1	139.1
Consumer foods	134.3	135.1	137.2	141.1	142.2	140.7	140.4	141.1	142.7	143.7
Fresh fruits and melons	90.0	103.6	91.4	92.6	101.9	103.4	115.3	107.0	92.8	89.7
Fresh and dry vegetables	139.5	118.0	126.7	152.7	110.8	107.2	120.5	144.8	176.9	217.0
Dried and dehydrated fruits	124.4	121.2	122.9	117.3	118.6	118.8	120.3	120.1	120.1	119.6
Canned fruits and juices	134.4	137.8	140.0	142.7	143.7	143.3	143.4	143.3	143.8	143.5
Frozen fruits, juices and ades	116.1	123.0	120.9	116.2	111.8	113.3	117.8	117.5	119.7	118.9
Fresh vegetables except potatoes	137.9	117.7	135.0	178.7	112.3	105.9	121.0	146.1	188.7	242.5
Canned vegetables and juices	121.5	120.9	121.2	121.3	126.5	128.0	127.8	128.2	128.3	128.1
Frozen vegetables	125.4	126.1	126.0	127.7	130.0	129.2	128.8	129.8	130.6	130.2
Potatoes	122.5	126.9	100.5	98.5	140.1	141.2	149.4	180.1	179.0	181.8
Eggs for fresh use (1991=100)	90.1	77.9	84.9	88.2	77.0	86.6	79.2	89.4	74.5	92.6
Bakery products	175.8	178.0	182.3	186.5	189.0	189.1	188.7	188.9	189.7	189.6
Meats	101.4	104.6	114.3	121.5	120.0	114.2	114.9	112.9	117.9	118.6
Beef and veal	99.5	106.3	113.7	125.9	117.5	111.7	113.3	111.7	120.0	121.0
Pork	96.6	96.0	113.4	117.3	123.4	114.4	114.3	111.9	115.0	115.0
Processed poultry	120.7	114.0	112.9	114.1	121.0	120.0	116.3	116.4	115.5	114.1
Unprocessed and packaged fish	183.0	190.9	198.1	200.9	181.4	181.5	176.8	183.1	202.1	184.2
Dairy products	138.1	139.2	133.7	138.7	150.5	145.4	140.3	140.9	139.8	138.1
Processed fruits and vegetables	125.8	128.1	128.6	128.2	130.6	131.2	131.4	131.7	132.4	132.0
Shortening and cooking oil	143.4	140.4	132.4	131.4	134.8	132.2	133.2	133.3	131.8	132.1
Soft drinks	134.8	137.9	144.1	148.8	149.3	149.7	148.1	149.3	151.5	151.9
Finished consumer goods less foods	126.4	130.5	138.4	141.9	138.9	137.0	135.1	135.5	135.4	137.2
Alcoholic beverages	135.2	136.7	140.6	145.0	146.2	146.3	146.5	146.1	146.5	146.9
Apparel	126.6	127.1	127.4	127.0	126.5	126.6	126.0	125.8	125.8	125.3
Footwear	144.7	144.5	144.9	145.8	145.7	145.8	145.7	146.0	146.0	145.8
Tobacco products	283.4	374.0	397.2	426.8	447.5	455.3	455.5	447.9	448.1	448.7
Intermediate materials [3]	123.0	123.2	129.2	130.7	127.7	126.6	125.4	125.6	125.5	126.5
Materials for food manufacturing	123.1	120.8	119.2	122.4	126.4	123.9	122.5	122.6	123.3	123.2
Flour	109.2	104.3	103.8	108.8	112.7	112.2	109.7	113.5	113.5	113.8
Refined sugar [4]	119.8	121.0	110.6	109.2	111.1	111.4	113.6	115.9	115.9	116.5
Crude vegetable oils	131.1	90.2	73.6	65.8	71.2	72.9	73.8	75.2	70.1	70.7
Crude materials [5]	96.7	98.2	120.6	132.2	97.6	102.1	94.8	98.1	97.6	102.3
Foodstuffs and feedstuffs	103.8	98.7	100.2	109.1	104.1	98.5	96.4	99.5	102.3	102.9
Fruits and vegetables and nuts [6]	117.2	117.4	111.1	122.7	111.5	110.3	122.1	127.7	133.5	148.6
Grains	93.4	80.1	78.3	84.0	78.5	80.3	82.6	82.2	81.0	81.3
Slaughter livestock	82.3	86.4	96.5	107.9	93.5	84.3	84.0	89.7	96.4	98.4
Slaughter poultry, live	141.4	129.9	124.7	129.3	137.2	134.5	121.4	124.7	119.9	118.8
Plant and animal fibers	110.4	86.5	93.9	80.5	48.3	54.2	54.8	54.9	56.6	55.2
Fluid milk	112.6	106.3	92.0	103.6	117.5	108.0	101.6	99.5	100.1	94.8
Oilseeds	114.4	90.8	93.8	86.9	86.7	86.5	85.2	86.3	85.7	88.7
Leaf tobacco	104.6	101.6	--	107.0	112.0	116.1	115.2	113.8	111.1	81.7
Raw cane sugar	117.2	113.7	101.8	111.8	110.6	111.3	112.8	111.7	109.4	105.8

-- = Not available. 1. Commodities ready for sale to ultimate consumer. 2. Includes all raw, intermediate, and processed foods (excludes soft drinks, alcoholic beverages, and manufactured animal feeds). 3. Commodities requiring further processing to become finished goods. 4. All types and sizes of refined sugar. 5. Products entering market for the first time that have not been manufactured at that point. 6. Fresh and dried. This table is compiled with data provided by the Bureau of Labor Statistics (BLS). BLS operates a website at http://www.bls.gov and a Producer Prices Information Hotline at (202) 691-7705.

Farm-Retail Price Spreads

Table 8—Farm-Retail Price Spreads

	Annual			2001				2002		
	1999	2000	2001	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Market basket [1]										
Retail cost (1982-84=100)	167.3	170.6	177.2	175.4	179.3	178.9	178.9	180.7	180.4	181.0
Farm value (1982-84=100)	98.3	96.9	106.2	104.2	109.6	108.2	105.6	106.8	105.2	109.4
Farm-retail spread (1982-84=100)	204.5	210.3	215.4	213.8	216.8	217.0	218.5	220.6	221.0	219.7
Farm value-retail cost (%)	20.6	19.9	21.0	20.8	21.4	21.2	20.7	20.7	20.4	21.2
Meat products										
Retail cost (1982-84=100)	142.3	150.4	159.3	157.9	161.8	161.2	160.0	160.0	159.9	161.3
Farm value (1982-84=100)	81.6	88.4	97.4	93.2	100.6	100.5	100.9	101.1	100.9	101.3
Farm-retail spread (1982-84=100)	204.7	214.0	222.8	224.3	224.6	223.5	220.6	220.4	220.5	222.9
Farm value-retail cost (%)	29.0	29.8	31.0	29.9	31.5	31.6	31.9	32.0	31.9	31.8
Dairy products										
Retail cost (1982-84=100)	159.6	160.7	167.1	163.2	170.8	171.2	170.8	169.9	170.1	169.4
Farm value (1982-84=100)	107.9	98.8	118.5	110.8	123.2	116.8	105.9	106.1	104.0	105.6
Farm-retail spread (1982-84=100)	207.2	217.7	211.8	211.5	214.7	221.4	230.7	228.7	231.0	228.3
Farm value-retail cost (%)	32.4	29.5	34.0	32.6	34.6	32.7	29.7	30.0	29.3	29.9
Poultry										
Retail cost (1982-84=100)	157.9	159.8	164.9	162.6	169.6	166.4	167.7	166.8	167.8	168.0
Farm value (1982-84=100)	119.0	117.4	126.2	126.4	132.4	127.1	118.9	116.8	108.7	102.7
Farm-retail spread (1982-84=100)	202.7	208.7	209.3	204.3	212.4	211.6	223.9	224.4	235.9	243.2
Farm value-retail cost (%)	40.3	39.3	41.0	41.6	41.8	40.9	38.0	37.5	34.7	32.7
Eggs										
Retail cost (1982-84=100)	128.1	131.9	136.4	139.2	132.3	138.4	133.5	138.4	138.6	141.0
Farm value (1982-84=100)	74.9	80.6	74.3	89.0	76.6	83.4	70.5	77.4	62.9	88.5
Farm-retail spread (1982-84=100)	223.7	223.9	248.0	229.3	232.3	237.3	246.8	248.1	274.6	235.3
Farm value-retail cost (%)	37.6	39.3	35.0	41.1	37.2	38.7	33.9	35.9	29.2	40.3
Cereal and bakery products										
Retail cost (1982-84=100)	185.0	188.3	193.8	191.9	195.2	194.9	195.3	196.7	197.6	197.0
Farm value (1982-84=100)	82.5	75.2	78.8	81.3	77.9	77.3	76.6	77.6	76.5	76.9
Farm-retail spread (1982-84=100)	199.2	204.0	209.9	207.3	211.6	211.3	211.9	213.3	214.5	213.8
Farm value-retail cost (%)	5.5	4.9	5.0	5.2	4.9	4.9	4.8	4.8	4.7	4.8
Fresh fruit										
Retail cost (1982-84=100)	294.3	284.3	291.7	282.1	296.3	296.4	298.7	305.2	289.9	291.5
Farm value (1982-84=100)	153.7	141.3	145.7	139.0	173.1	168.7	170.8	168.7	162.4	160.4
Farm-retail spread (1982-84=100)	359.3	350.3	359.1	348.2	353.2	355.4	357.7	368.2	348.8	352.0
Farm value-retail cost (%)	16.5	15.7	15.8	15.6	18.5	18.0	18.1	17.5	17.7	17.4
Fresh vegetables										
Retail cost (1982-84=100)	209.3	219.4	230.6	238.2	229.1	228.6	230.4	251.6	258.1	265.3
Farm value (1982-84=100)	118.1	121.4	129.9	148.3	108.9	111.7	119.1	141.5	154.7	209.3
Farm-retail spread (1982-84=100)	256.2	269.8	282.4	284.4	290.9	288.7	287.6	308.2	311.2	294.1
Farm value-retail cost (%)	19.2	18.8	19.1	21.1	16.1	16.6	17.6	19.1	20.4	26.8
Processed fruits and vegetables										
Retail cost (1982-84=100)	154.8	153.6	159.3	156.6	161.6	160.5	161.1	161.7	162.3	162.9
Farm value (1982-84=100)	113.5	106.4	107.9	106.2	110.6	111.4	112.2	111.6	111.5	112.9
Farm-retail spread (1982-84=100)	167.7	168.3	175.3	172.3	177.5	175.8	176.4	177.3	178.1	178.5
Farm value-retail cost (%)	17.4	16.5	16.1	16.1	16.3	16.5	16.6	16.4	16.3	16.5
Fats and oils										
Retail cost (1982-84=100)	148.3	147.4	155.7	153.1	159.5	155.6	156.9	158.3	157.2	156.4
Farm value (1982-84=100)	89.0	80.9	76.9	75.3	74.6	78.6	80.3	76.2	75.6	79.6
Farm-retail spread (1982-84=100)	170.0	171.9	184.7	181.7	190.7	183.9	185.1	188.5	187.2	184.7
Farm value-retail cost (%)	16.2	14.8	13.3	13.2	12.6	13.6	13.8	12.9	12.9	13.7

See footnotes at end of table, next page.

Table 8—Farm-Retail Price Spreads (continued)

	Annual			2001				2002		
	1999	2000	2001	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Beef, all fresh retail value (cents/lb.)	260.5	275.3	300.5	298.5	303.1	303.5	303.3	305.1	307.3	304.7
Beef, Choice										
Retail value (cents/lb.)[2]	287.8	306.4	337.7	334.3	338.0	337.6	330.3	330.8	330.5	329.8
Wholesale value (cents/lb.)[3]	171.6	182.3	192.1	202.7	180.4	174.3	177.3	175.2	188.2	188.6
Net farm value (cents/lb.)[4]	141.1	149.0	154.5	170.0	142.3	136.3	137.8	145.4	155.1	155.6
Farm-retail spread (cents/lb.)	146.7	157.4	183.2	164.3	195.7	201.3	192.5	185.4	175.4	174.2
Wholesale-retail (cents/lb.)[5]	116.2	124.1	145.6	131.6	157.6	163.3	153.0	155.6	142.3	141.2
Farm-wholesale (cents/lb.)[6]	30.5	33.3	37.6	32.7	38.1	38.0	39.5	29.8	33.1	33.0
Farm value-retail value (%)	49.0	48.6	45.8	50.9	42.1	40.4	41.7	44.0	46.9	47.2
Pork										
Retail value (cents/lb.)[2]	241.5	258.2	269.4	265.4	276.4	271.3	271.4	270.8	271.7	269.7
Wholesale value (cents/lb.)[3]	99.0	114.5	117.8	117.3	113.5	105.7	105.5	108.4	108.3	104.6
Net farm value (cents/lb.)[4]	60.4	79.4	81.2	86.0	73.1	62.9	62.4	71.5	72.4	66.7
Farm-retail spread (cents/lb.)	181.1	178.8	188.2	179.4	203.3	208.4	209.0	199.3	199.3	203.0
Wholesale-retail (cents/lb.)[5]	142.5	143.7	151.6	148.1	162.9	165.6	165.9	162.4	163.4	165.1
Farm-wholesale (cents/lb.)[6]	38.6	35.1	36.6	31.3	40.4	42.8	43.1	36.9	35.9	37.9
Farm value-retail value (%)	25.0	30.8	30.1	32.4	26.4	23.2	23.0	26.4	26.6	24.7

1. Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by the Bureau of Labor Statistics (BLS). Farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for by-product. Farm values are based on prices at first point of sale, and may include marketing charges such as grading and packing for some commodities. The farm-retail spread, the difference between the retail value and farm value, represents charges for assembling, processing, transporting, and distributing. 2. Weighted-average value of retail cuts from pork and Choice yield grade 3 beef. Prices from BLS. 3. Value of wholesale (boxed beef) and wholesale cuts (pork) equivalent to 1 pound of retail cuts adjusted for transportation costs and by-product values. 4. Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of by-products. 5. Charges for retailing and other marketing services such as wholesaling and in-city transportation. 6. Charges for livestock marketing, processing, and transportation. *Information contacts: Veronica Jones (202) 694-5387, William F. Hahn (202) 694-5175*

Table 9—Price Indexes of Food Marketing Costs

	Annual			2000			2001			
	1998	1999	2000	II	III	IV	I	II	III	IV
					*1987=100**					
Labor—hourly earnings and benefits	490.4	503.3	514.0	512.0	514.1	521.7	527.5	531.8	534.4	541.5
Processing	499.3	511.4	525.0	523.4	526.9	531.3	536.4	542.7	546.5	553.4
Wholesaling	552.5	564.6	589.4	586.4	587.3	601.0	606.4	611.3	618.7	625.5
Retailing	454.1	465.8	469.9	467.8	465.2	477.2	483.8	485.8	485.2	492.7
Packaging and containers	395.5	399.4	412.0	410.6	413.5	413.7	414.2	417.8	416.6	414.9
Paperboard boxes and containers	365.2	373.0	407.7	413.0	412.4	413.5	412.0	413.1	412.1	409.7
Metal cans	487.9	486.6	452.5	440.1	440.1	440.1	441.5	444.3	446.0	445.7
Paper bags and related products	432.9	440.9	470.4	472.4	477.6	474.5	474.2	481.3	474.6	472.6
Plastic films and bottles	322.8	324.2	336.7	330.6	342.4	344.3	344.0	345.8	344.4	342.6
Glass containers	446.8	447.1	450.8	451.1	451.1	450.8	460.2	471.7	473.7	473.0
Metal foil	232.0	227.3	232.4	231.3	233.8	234.8	235.5	246.1	242.7	241.4
Transportation services	428.3	394.0	394.3	393.3	394.6	396.9	401.0	403.1	406.3	405.9
Advertising	624.5	623.7	635.7	635.0	635.7	638.6	644.3	645.6	646.0	649.3
Fuel and power	619.7	651.5	841.1	822.2	866.1	859.6	830.3	826.6	826.4	730.7
Electric	492.1	489.4	498.2	487.0	523.8	504.9	514.3	526.1	559.9	529.1
Petroleum	457.0	565.9	1,135.8	1,102.2	1,160.6	1,166.4	998.5	974.7	937.2	740.4
Natural gas	1,239.4	1,235.6	1,275.4	1,259.8	1,300.7	1,305.7	1,403.3	1,391.5	1,363.3	1,259.1
Communications, water and sewage	307.6	309.3	309.1	307.8	308.7	309.5	312.6	312.5	314.2	315.5
Rent	260.5	256.9	258.2	258.0	259.1	259.0	259.2	257.7	257.1	256.0
Maintenance and repair	529.3	541.6	561.2	558.3	564.7	569.7	574.8	578.8	585.2	590.3
Business services	522.9	531.9	544.6	543.2	545.9	548.8	555.3	558.0	560.4	563.1
Supplies	332.3	327.7	348.5	338.2	344.5	345.8	349.2	347.0	342.8	339.1
Property taxes and insurance	598.3	619.7	654.6	647.4	658.6	672.6	680.9	687.5	695.1	704.3
Interest, short-term	103.7	103.7	115.4	116.6	117.7	116.0	91.0	64.1	55.0	33.8
Total marketing cost index	467.2	472.2	491.5	488.8	493.1	497.1	499.5	502.1	503.6	502.2

Last two quarters preliminary. * Indexes measure changes in employee earnings and benefits and in prices of supplies used in processing, wholesaling, and retailing U.S. farm foods purchased for at-home consumption. *Information contact: Veronica Jones (202) 694-5387*

Livestock & Products

Table 10—U.S. Meat Supply & Use

	Beg. stocks	Production[1]	Imports	Total supply	Exports	Ending stocks	Consumption		Conversion factor[3]	Primary market price[4]
							Total	Per capita[2]		
				Million lbs.[5]				*Lbs.*		*$/cwt*
Beef										
1998	465	25,760	2,643	28,868	2,171	393	26,305	68	0.700	61.48
1999	393	26,493	2,873	29,759	2,412	411	26,936	68	0.700	65.56
2000	411	26,888	3,031	30,330	2,468	525	27,337	68	0.700	69.65
2001	525	26,212	3,161	29,898	2,271	606	27,022	66	0.700	72.71
2002	606	26,155	3,245	30,006	2,250	425	27,331	66	0.700	73.30
Pork										
1998	408	19,010	705	20,123	1,230	584	18,308	52	0.776	34.72
1999	584	19,308	827	20,720	1,277	489	18,954	53	0.776	34.00
2000	489	18,952	967	20,407	1,287	478	18,643	51	0.776	44.70
2001	478	19,160	950	20,588	1,563	536	18,489	50	0.776	45.81
2002	536	19,337	960	20,833	1,485	525	18,823	51	0.776	39.86
Veal[6]										
1998	8	262	0	270	0	5	265	1	0.83	82.29
1999	5	235	0	240	0	5	235	1	0.83	89.62
2000	5	225	0	230	0	5	225	1	0.83	105.75
2001	5	205	0	210	0	6	204	1	0.83	106.70
2002	6	199	0	205	0	5	200	1	0.83	103.07
Lamb and mutton										
1998	14	251	112	377	6	12	360	1	0.89	74.20
1999	12	248	112	372	5	9	358	1	0.89	75.97
2000	9	234	130	372	5	13	354	1	0.89	79.40
2001	13	227	146	386	7	12	368	1	0.89	72.04
2002	12	220	155	387	5	13	369	1	0.89	70.75
Total red meat										
1998	894	45,283	3,461	49,638	3,407	994	45,238	120	--	--
1999	994	46,284	3,813	51,091	3,694	914	46,483	122	--	--
2000	914	46,299	4,127	51,340	3,760	1,021	46,559	121	--	--
2001	1,021	45,804	4,257	51,082	3,840	1,160	46,082	118	--	--
2002	1,160	45,911	4,360	51,431	3,740	968	46,723	118	--	--
										¢/lb
Broilers										
1998	607	27,612	6	28,225	4,673	711	22,841	71	0.859	63
1999	711	29,468	4	30,184	4,919	796	24,469	75	0.859	58
2000	796	30,209	6	31,011	5,392	798	24,821	76	0.859	56
2001	798	30,938	14	31,749	6,186	712	24,851	75	0.859	59
2002	712	31,707	8	32,427	6,100	725	25,602	76	0.859	58
Mature chickens										
1998	7	525	0	533	426	6	101	1	1.0	--
1999	6	554	0	562	393	8	162	1	1.0	--
2000	8	531	0	540	220	9	311	1	1.0	--
2001	9	515	0	528	182	8	337	1	1.0	--
2002	8	505	0	514	170	8	336	1	1.0	--
Turkeys										
1998	415	5,215	0	5,630	446	304	4,880	18	1.0	62
1999	304	5,230	1	5,535	378	254	4,902	18	1.0	69
2000	254	5,333	1	5,589	445	241	4,902	17	1.0	71
2001	241	5,489	1	5,732	487	241	5,003	18	1.0	66
2002	241	5,551	1	5,793	470	300	5,022	17	1.0	65
Total poultry										
1998	1,029	33,352	6	34,388	5,545	1,022	27,821	89	--	--
1999	1,022	35,252	7	36,281	5,690	1,058	29,533	93	--	--
2000	1,058	36,073	9	37,140	6,058	1,048	30,034	94	--	--
2001	1,048	36,942	18	38,008	6,856	961	30,191	93	--	--
2002	961	37,763	11	38,735	6,740	1,033	30,961	95	--	--
Red meat and poultry										
1998	1,923	78,636	3,467	84,026	8,951	2,016	73,059	209	--	--
1999	2,016	81,537	3,820	87,372	9,384	1,971	76,017	215	--	--
2000	1,971	82,372	4,136	88,480	9,818	2,069	76,594	215	--	--
2001	2,069	82,746	4,275	89,090	10,695	2,121	76,273	211	--	--
2002	2,121	83,674	4,371	90,166	10,480	2,001	77,684	213	--	--

-- = Not available. Values for the last 2 years are forecasts. 1. Total including farm production for red meat and federally inspected plus nonfederally inspected for poultry. 2. Retail-weight basis. 3. Red meat, carcass to retail conversion; poultry, ready-to-cook production to retail weight. 4. Beef: Medium #1, Nebraska Direct 1,100-1,300 lb.; pork: barrows and gilts, Iowa, Southern Minnesota; veal: farm price of calves; lamb and mutton: choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 5. Carcass weight for red meats and certified ready-to-cook for poultry. 6. Beginning in 1989, veal trade is no longer reported separately. *Information contact: LaVerne Williams (202) 694-5190*

Table 11—U.S. Egg Supply & Use

	Beg. stocks	Production	Imports	Total supply	Exports	Hatching use	Ending stocks	Consumption: Total	Consumption: Per capita	Primary market price*
	Million doz.								*No.*	*¢/doz.*
1995	14.9	6,215.6	4.1	6,234.6	208.9	847.2	11.2	5,167.3	233.5	72.9
1996	11.2	6,350.7	5.4	6,367.3	253.1	863.8	8.5	5,241.8	234.6	88.2
1997	8.5	6,473.1	6.9	6,488.5	227.8	894.7	7.4	5,358.6	235.8	81.2
1998	7.4	6,657.9	5.8	6,671.2	218.8	921.8	8.4	5,522.2	240.1	75.8
1999	8.4	6,912.0	7.4	6,927.8	161.9	941.7	7.6	5,816.6	250.0	65.6
2000	7.6	7,033.5	8.4	7,049.5	171.1	940.2	11.4	5,926.8	251.8	68.9
2001	11.4	7,144.0	8.9	7,164.2	190.4	952.2	10.4	6,011.3	252.3	67.2
2002	10.4	7,195.0	8.0	7,213.4	165.0	965.0	12.0	6,071.4	252.2	65.0

Values for the last year are forecasts. Values for previous year are preliminary. * Cartoned grade A large eggs, New York.
Information contact: LaVerne Williams (202) 694-5190

Table 12—U.S. Milk Supply & Use

	Commercial: Production	Commercial: Farm use	Commercial: Farm marketings	Commercial: Beg. stocks	Imports	Total commercial supply	Commercial: CCC net removals	Commercial: Ending stocks	Commercial: Disappearance	All milk price[1]	CCC net removals: Skim solids basis	CCC net removals: Total solids basis[2]
	Million lbs. (milkfat basis)									*$/cwt*	*Billion lbs.*	
1994	153.6	1.7	151.9	4.5	2.9	159.3	4.8	4.3	150.3	12.97	3.7	4.2
1995	155.3	1.6	153.7	4.3	2.9	160.9	2.1	4.1	154.9	12.74	4.4	3.5
1996	154.0	1.5	153.5	4.1	2.9	159.5	0.1	4.7	154.7	14.74	0.7	0.5
1997	156.1	1.4	154.7	4.7	2.7	162.1	1.1	4.9	156.1	13.34	3.7	2.7
1998	157.4	1.4	156.1	4.9	4.6	165.5	0.4	5.3	159.9	15.42	4.0	2.6
1999	162.7	1.4	161.3	5.3	4.7	171.4	0.3	6.1	164.9	14.36	6.5	4.0
2000	167.6	1.3	166.2	6.1	4.4	176.8	0.8	6.9	169.1	12.40	8.6	5.5
2001	165.3	1.3	164.1	6.8	5.7	176.6	0.2	7.0	169.4	14.93	5.8	3.5
2002	169.4	1.2	168.2	7.0	4.8	180.0	0.2	6.6	173.2	12.95	5.4	3.3

Values for latest year are forecasts. Values for the preceding year are preliminary. 1. Delivered to plants and dealers; does not reflect deductions.
2. Arbitrarily weighted average of milkfat basis (40 percent) and solids basis (60 percent).*Information contact: Jim Miller (202) 694-5184*

Table 13—Poultry & Eggs

	Annual: 1999	Annual: 2000	Annual: 2001	2001: Feb	2001: Sep	2001: Oct	2001: Nov	2001: Dec	2002: Jan	2002: Feb
Broilers										
Federally inspected slaughter certified (mil. lb.)	29,741.4	30,495.2	31,265.8	2,322.2	2,438.7	2,897.2	2,500.7	2,464.8	2,786.5	2,461.7
Wholesale price, 12-city (cents/lb.)	58.1	56.2	59.1	57.5	61.9	60.2	58.9	56.0	56.9	55.9
Price of grower feed ($/ton)[1]	103.1	104.7	101.3	102.8	102.4	95.3	96.3	100.0	100.0	98.6
Broiler-feed price ratio[2]	7.2	6.6	7.8	7.2	8.4	8.6	8.1	7.4	7.4	6.9
Stocks beginning of period (mil. lb.)	711.1	795.6	797.6	746.4	615.5	616.7	628.7	678.8	711.8	711.3
Broiler-type chicks hatched (mil.)	8,715.4	8,792.1	8,901.6	670.5	730.0	739.7	695.7	769.4	775.7	702.6
Turkeys										
Federally inspected slaughter certified (mil. lb.)	5,296.5	5,402.2	5,561.7	409.3	429.1	541.3	493.0	419.8	484.0	445.5
Wholesale price, Eastern U.S. 8-16 lb. young hens (cents/lb.)	69.0	70.5	66.3	61.2	68.8	72.9	73.5	67.7	60.9	60.0
Price of turkey grower feed ($/ton)[1]	95.0	95.9	95.6	100.3	97.3	91.7	92.3	95.1	94.7	94.7
Turkey-feed price ratio[2]	8.6	8.7	8.2	7.5	8.3	9.6	9.6	8.1	7.2	7.2
Stocks beginning of period (mil. lb.)	304.3	254.3	241.3	291.4	545.3	542.0	497.9	260.0	240.5	325.2
Poults placed in U.S. (mil.)	296.1	297.3	301.9	23.8	22.4	24.4	24.2	24.6	25.9	24.3
Eggs										
Farm production (mil.)	82,944.0	84,393.0	85,806.0	6,524.0	7,062.0	7,340.0	7,191.0	7,403.0	7,245.0	6,557.0
Average number of layers (mil.)	322.9	328.3	335.4	335.8	335.0	337.1	337.9	338.5	338.3	336.9
Rate of lay (eggs per layer on farms)	256.8	257.1	255.8	19.4	21.1	21.8	21.3	21.9	21.4	19.5
Cartoned price, New York, grade A large (cents/doz.)[3]	65.6	68.9	67.1	71.5	61.5	66.1	71.3	67.1	69.7	60.7
Price of laying feed ($/ton)[1]	124.5	123.9	125.9	119.6	133.4	117.0	114.4	126.9	122.2	133.1
Egg-feed price ratio[2]	9.8	10.6	9.9	11.4	8.5	10.7	11.5	9.3	10.2	8.4
Stocks, first of month Frozen (mil. doz.)	8.4	7.6	11.4	12.8	13.5	13.4	11.8	10.5	10.4	10.0
Replacement chicks hatched (mil.)	451.7	429.7	450.5	38.2	36.6	36.5	31.6	31.5	35.5	34.3

1. Calculated from price ratios that were revised February 1995. 2. Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight (revised February 1995). 3. Price of cartoned eggs to volume buyers for delivery to retailers.
Information contact: LaVerne Williams (202) 694-5190

Table 14—Dairy

	Annual			2001					2002	
	1999	2000	2001	Feb	Sep	Oct	Nov	Dec	Jan	Feb
Class III (BFP before 2000) 3.5% fat ($/cwt.)	12.43	9.74	13.10	10.27	15.90	14.60	11.31	11.80	11.87	11.63
Wholesale prices										
Butter, Central States (cents/lb.)[1]	125.2	118.5	167.7	138.1	219.7	151.9	135.2	130.2	136.2	126.9
Am. cheese, Wis. assembly pt. (cents/lb.)	142.3	116.2	144.9	120.0	173.9	139.7	126.4	129.1	131.9	123.2
Nonfat dry milk (cents/lb.)[2]	103.5	101.6	100.8	103.2	99.3	98.8	96.1	95.8	99.9	99.3
USDA net removals										
Total (mil. lb.)[3]	343.5	841.4	151.1	21.7	3.7	-12.3	19.7	17.4	22.6	26.0
Butter (mil. lb.)	3.7	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Am. cheese (mil. lb.)	4.6	28.0	4.6	1.2	0.2	-1.7	0.8	0.8	0.8	0.8
Nonfat dry milk (mil. lb.)	540.6	692.6	494.4	46.9	7.5	16.7	53.9	43.4	67.0	82.7
Milk										
Milk prod. 20 states (mil. lb.)	140,062	144,535	142,817	11,108	11,376	11,756	11,492	12,008	12,272	11,365
Milk per cow (lb.)	18,109	18,533	18,438	1,431	1,472	1,522	1,485	1,549	1,585	1,468
Number of milk cows (1,000)	7,734	7,799	7,746	7,764	7,730	7,726	7,739	7,750	7,745	7,744
U.S. milk production (mil. lb.)[4]	162,716	167,559	165,336	12,894	13,124	13,616	13,305	13,897	14,250	13,193
Stocks, beginning[3]										
Total (mil. lb.)	5,302	6,186	7,010	7,960	9,280	9,002	8,386	7,079	7,265	8,445
Commercial (mil. lb.)	5,274	6,142	6,871	7,779	9,001	8,755	8,167	6,873	7,047	8,229
Government (mil. lb.)	28	44	139	181	279	247	219	206	218	216
Imports, total (mil. lb.)[3]	4,772	4,445	5,716	337	319	524	512	396	435	362
Commercial disappearance (mil. lb.)[3]	164,947	169,123	169,419	12,610	13,580	14,632	14,986	13,994	13,376	12,584
Butter										
Production (mil. lb.)	1,277.1	1,273.6	1,224.6	110.2	88.7	111.0	101.3	123.4	140.7	125.5
Stocks, beginning (mil. lb.)	25.9	24.9	24.0	68.1	117.0	110.5	100.4	57.6	55.5	99.9
Commercial disappearance (mil. lb.)	1,310.7	1,297.6	1,268.7	95.7	97.7	125.0	147.2	127.5	98.5	98.7
American cheese										
Production (mil. lb.)	3,532.6	3,633.9	3,551.8	274.8	282.5	296.4	286.7	314.4	315.2	288.6
Stocks, beginning (mil. lb.)	407.6	458.0	521.1	504.7	497.5	486.3	462.5	437.9	448.3	452.9
Commercial disappearance (mil. lb.)	3,542.2	3,588.1	3,688.6	278.0	296.9	333.9	316.7	306.6	314.2	268.9
Other cheese										
Production (mil. lb.)	4,361.5	4,620.6	4,607.8	357.4	362.0	386.6	399.6	389.9	382.4	355.8
Stocks, beginning (mil. lb.)	109.5	163.3	185.2	202.9	222.1	221.2	208.9	193.2	210.9	234.2
Commercial disappearance (mil. lb.)	4,672.1	4,963.3	4,950.2	363.1	389.4	435.6	459.1	411.5	379.7	388.8
Nonfat dry milk										
Production (mil. lb.)	1,359.7	1,451.6	1,434.6	132.4	94.8	102.8	121.3	130.2	118.9	125.2
Stocks, beginning (mil. lb.)	56.9	150.9	146.3	145.5	108.9	102.9	100.4	112.7	135.8	120.0
Commercial disappearance (mil. lb.)	737.2	770.4	972.4	93.3	93.3	89.0	55.6	82.1	67.7	23.7
Frozen dessert										
Production (mil. gal.)[5]	1,301.0	1,312.2	1,311.9	97.3	106.2	100.7	88.9	84.1	95.9	99.4

	Annual			2000		2001				2002
	1999	2000	2001	III	IV	I	II	III	IV	I
Milk production (mil. lb.)	162,716	167,559	165,336	41,108	40,644	41,267	42,681	40,570	40,818	42,271
Milk per cow (lb.)	17,772	18,201	18,139	4,458	4,416	4,514	4,683	4,459	4,483	4,643
No. of milk cows (1,000)	9,156	9,206	9,115	9,221	9,203	9,143	9,114	9,098	9,105	9,105
Milk-feed price ratio	2.03	1.75	--	1.84	1.81	--	--	--	--	--
Returns over concentrate costs ($/cwt milk)	11.40	9.40	--	9.85	9.80	--	--	--	--	--

-- = Not available. Quarterly values for latest year are preliminary. 1. Grade AA Chicago before June 1998. 2. Prices paid f.o.b. Central States production area. 3. Milk equivalent, fat basis. 4. Monthly data ERS estimates. 5. Hard ice cream, ice milk, and hard sherbet. *Information contact: LaVerne Williams (202) 694-5190*

Table 15—Wool

	Annual			2000		2001				2002
	1999	2000	2001	III	IV	I	II	III	IV	I
U.S. wool price (¢/lb.)[1]	110	107	121	117	96	101	130	125	126	--
Imported wool price (¢/lb.)[2]	136	137	160	139	136	151	155	167	168	--
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	63,535	62,041	51,230	14,620	13,914	16,590	13,009	11,197	10,434	--
Carpet wool (1,000 lb.)	13,950	15,205	13,010	3,766	3,886	4,278	3,791	2,904	2,037	--

-- = Not available. 1. Wool price delivered at U.S. mills, clean basis, Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" and up. 2. Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10 cents.

Information contact: Wilma L. Davis (202) 694-5304

Table 16—Meat Animals

	Annual			2001				2002		
	1999	2000	2001	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Cattle on feed (7 states, 1000+ head capacity)										
Number on feed (1,000 head)[1]	9,021	9,752	10,076	10,012	9,613	10,231	10,203	9,910	9,951	9,905
Placed on feed (1,000 head)	21,446	21,875	21,145	1,530	2,315	1,581	1,330	1,907	1,543	1,654
Marketings (1,000 head)	20,124	20,674	19,955	1,603	1,640	1,541	1,545	1,792	1,537	1,565
Other disappearance (1,000 head)	676	702	774	80	57	68	78	74	52	60
Market prices ($/cwt)										
Slaughter cattle										
Choice steers, 1,100-1,300 lb.										
Texas	65.89	69.86	71.98	79.44	66.30	63.60	63.62	64.00	70.81	71.97
Neb. direct	65.56	69.65	72.43	79.80	66.58	64.71	64.00	67.55	71.15	72.59
Boning utility cows, Sioux Falls	38.40	41.71	44.49	46.10	43.25	37.75	38.38	43.75	41.88	44.06
Feeder steers										
Medium no. 1, Oklahoma City										
600-650 lb.	82.64	94.31	95.29	99.14	87.99	86.40	89.30	87.46	90.12	91.45
750-800 lb.	76.39	86.14	88.20	87.19	88.03	83.63	84.44	81.65	82.04	80.03
Slaughter hogs										
Barrows and gilts, 51-52 percent lean										
National Base converted to live equal.	34.00	44.70	45.81	48.41	41.27	35.49	35.14	40.16	40.65	37.47
Sows, Iowa, S.MN 1-2 300-400 lb.	19.26	29.79	33.98	34.37	31.60	25.01	25.28	27.79	29.45	29.50
Slaughter sheep and lambs										
Lambs, Choice, San Angelo	75.96	79.40	72.04	82.63	57.67	59.00	71.60	65.85	70.00	64.00
Ewes, Good, San Angelo	42.45	46.23	45.66	56.94	38.50	39.83	43.60	41.10	39.19	36.00
Feeder lambs										
Choice, San Angelo	80.74	95.86	89.38	115.44	68.50	70.67	76.90	76.25	84.25	78.00
Wholesale meat prices, Midwest										
Boxed beef cut-out value										
Choice, 700-800 lb.	110.90	117.45	122.17	130.92	113.58	108.70	110.74	110.14	109.59	120.02
Select, 700-800 lb.	101.91	108.83	114.42	127.54	104.64	101.46	105.53	107.91	107.18	117.13
Canner and cutter cow beef	66.51	72.57	--	--	--	--	--	--	--	--
Pork cutout	53.45	64.07	66.83	70.98	60.68	56.74	56.68	58.39	58.59	56.12
Pork loins, bone-in, 1/4" trim,14-19 lb.	100.38	117.13	116.97	128.53	108.69	97.57	98.50	106.95	105.73	100.08
Pork bellies, 12-14 lb.	57.12	77.46	78.61	78.04	61.30	63.58	69.13	70.87	70.75	72.55
Hams, bone-in, trimmed, 20-23 lb.	45.18	52.02	56.86	59.94	57.38	50.69	45.96	48.05	52.56	51.56
All fresh beef retail price	260.50	275.30	275.30	298.50	303.10	303.50	303.30	305.10	307.30	304.70
Commercial slaughter (1,000 head)[2]										
Cattle	36,150	36,247	36,247	2,918	3,161	2,903	2,779	3,056	2,615	2,737
Steers	17,932	18,060	18,060	1,417	1,522	1,375	1,377	1,450	1,256	1,330
Heifers	11,868	12,041	12,041	953	1,036	952	883	1,021	894	920
Cows	5,710	5,522	5,522	494	544	527	473	533	419	438
Bull and stags	639	624	624	54	59	50	46	52	46	49
Calves	1,282	1,132	1,132	84	94	87	84	87	73	78
Sheep and lambs	3,701	3,455	3,455	323	289	287	279	255	256	324
Hogs	101,544	97,955	97,955	8,329	9,330	8,717	8,419	8,658	7,500	7,981
Barrows and gilts	97,732	94,585	94,585	8,028	9,019	8,437	8,155	8,369	7,252	7,705
Commercial production (mil. lb.)										
Beef	26,386	26,776	26,776	2,096	2,388	2,201	2,110	2,330	1,987	2,059
Veal	226	216	216	16	18	16	16	17	14	15
Lamb and mutton	244	230	230	23	20	20	19	18	18	22
Pork	19,278	18,905	18,905	1,626	1,838	1,733	1,668	1,716	1,482	1,581

	Annual			2000	2001				2002	
	1999	2000	2001	IV	I	II	III	IV	I	II
Hogs and pigs (U.S.)[3]										
Inventory (1,000 head)[1]	62,206	59,342	59,138	59,495	59,138	57,524	58,603	59,577	59,074	58,698
Breeding (1,000 head)[1]	6,682	6,234	6,270	6,246	6,270	6,232	6,186	6,158	6,209	6,236
Market (1,000 head)[1]	55,523	53,109	52,868	53,250	52,868	51,292	52,417	53,419	52,864	52,461
Farrowings (1,000 head)	11,641	11,462	11,303	2,838	2,748	2,870	2,878	2,846	2,832	2,896
Pig crop (1,000 head)	102,354	101,354	99,473	25,112	23,963	25,509	25,539	24,972	24,711	--
Cattle on Feed, 7 states (1,000 head)[1, 4]										
Steers and steer calves	5,432	5,768	5,936	5,584	5,936	5,885	5,521	5,690	6,077	6,180
Heifers and heifer calves	3,552	3,942	4,081	3,877	4,081	3,913	3,894	3,882	3,769	3,718
Cows and bulls	37	42	59	41	59	61	51	41	64	36

-- = Not available. 1. Beginning of period. 2. Classes estimated. 3. Quarters are Dec. of preceding year to Feb. (I), Mar.-May (II), June-Aug. (III), and Sept.-Nov. (IV). 4. The 7 states include AZ, CA, CO, IA, KS, NE, and TX. *Information contact: Leland Southard (202) 694-5187*

Crops & Products

Table 17—Supply & Utilization[1,2]

	Area										
	Planted	Harvested	Yield	Production	Total supply[4]	Feed & residual	Other domestic use	Exports	Total use	Ending stocks	Farm price[5]
	Mil. acres		*Bu./acre*			*Mil. bu.*					*$/bu.*
Wheat											
1997/98	70.4	62.8	39.5	2,481	3,020	251	1,007	1,040	2,298	722	3.38
1998/99	65.8	59.0	43.2	2,547	3,373	391	990	1,046	2,427	946	2.65
1999/00	62.7	53.8	42.7	2,299	3,339	288	1,013	1,089	2,390	950	2.48
2000/01*	62.6	53.1	42.0	2,232	3,272	299	1,036	1,061	2,396	876	2.62
2001/02*	59.6	48.7	40.2	1,958	2,934	200	1,026	975	2,201	733	2.75-2.85
	Mil. acres		*Lb./acre*			*Mil. cwt (rough equiv)*					*$/cwt*
Rice[6]											
1997/98	3.1	3.1	5,897.0	183.0	219.5	--	6/ 103.9	87.7	191.6	27.9	9.70
1998/99	3.3	3.3	5,663.0	184.4	223.0	--	6/ 114.0	86.8	200.9	22.1	8.89
1999/00	3.5	3.5	5,866.0	206.0	238.2	--	6/ 121.9	88.8	210.7	27.5	5.93
2000/01*	3.1	3.0	6,281.0	190.9	229.2	--	6/ 114.3	86.4	200.7	28.5	5.61
2001/02*	3.3	3.3	6,429.0	213.0	255.0	--	6/ 123.1	88.0	211.1	43.9	4.15-4.25
	Mil. acres		*Bu./acre*			*Mil. bu.*					*$/bu.*
Corn											
1997/98	79.5	72.7	126.7	9,207	10,099	5,482	1,805	1,504	8,791	1,308	2.43
1998/99	80.2	72.6	134.4	9,759	11,085	5,468	1,846	1,984	9,298	1,787	1.94
1999/00	77.4	70.5	133.8	9,431	11,232	5,665	1,913	1,937	9,515	1,718	1.82
2000/01*	79.6	72.4	136.9	9,915	11,639	5,838	1,967	1,935	9,740	1,899	1.85
2001/02*	75.8	68.8	138.2	9,507	11,416	5,825	2,045	1,925	9,795	1,621	1.85-1.95
	Mil. acres		*Bu./acre*			*Mil. bu.*					$/bu.
Sorghum											
1997/98	10.1	9.2	69.2	634	681	365	55	212	632	49	2.21
1998/99	9.6	7.7	67.3	520	569	262	45	197	504	65	1.66
1999/00	9.3	8.5	69.7	595	660	285	55	255	595	65	1.57
2000/01*	9.2	7.7	60.9	471	536	220	35	239	494	42	1.89
2001/02*	10.3	8.6	59.9	515	556	215	45	250	510	46	1.80-1.90
	Mil. acres		*Bu./acre*			*Mil. bu.*					*$/bu.*
Barley											
1997/98	6.7	6.2	58.1	360	510	144	172	74	390	119	2.38
1998/99	6.3	5.9	60.0	352	501	161	170	29	360	142	1.98
1999/00	5.2	4.7	59.2	280	450	138	172	28	338	111	2.13
2000/01*	5.9	5.2	61.1	319	459	123	172	58	353	106	2.11
2001/02*	5.0	4.3	58.2	250	379	95	172	28	295	84	2.20-2.30
	Mil. acres		*Bu./acre*			*Mil. bu.*					*$/bu.*
Oats											
1997/98	5.1	2.8	59.5	167	332	185	72	2	258	74	1.60
1998/99	4.9	2.8	60.2	166	348	196	69	2	266	81	1.10
1999/00	4.7	2.5	59.6	146	326	180	68	2	250	76	1.12
2000/01*	4.5	2.3	64.2	150	332	189	68	2	259	73	1.10
2001/02*	4.4	1.9	61.3	117	285	155	72	3	230	55	1.50-1.60
	Mil. acres		*Bu./acre*			*Mil. bu.*					*$/bu.*
Soybeans[7]											
1997/98	70.0	69.1	38.9	2,689	2,826	156	1,597	873	2,626	200	6.47
1998/99	72.0	70.4	38.9	2,741	2,944	201	1,590	805	2,595	348	4.93
1999/00	73.7	72.4	36.6	2,654	3,006	164	1,578	975	2,716	290	4.63
2000/01*	74.3	72.4	38.1	2,758	3,052	163	1,641	1,000	2,804	248	4.54
2001/02*	74.1	73.0	39.6	2,891	3,141	171	1,685	1,020	2,876	265	4.10-4.40
						Mil. lbs.					*¢/lb.*
Soybean oil											
1997/98	--	--	--	18,143	19,723	--	15,262	3,079	18,341	1,382	25.84
1998/99	--	--	--	18,081	19,546	--	15,655	2,372	18,027	1,520	19.90
1999/00	--	--	--	17,825	19,426	--	16,056	1,375	17,431	1,995	15.60
2000/01*	--	--	--	18,434	20,502	--	16,219	1,406	17,625	2,877	14.15
2001/02*	--	--	--	18,700	21,655	--	16,975	2,150	19,125	2,530	14.25-15.75
						1,000 tons					*$/ton*[8]
Soybean meal											
1997/98	--	--	--	38,176	38,443	--	28,895	9,329	38,225	218	185.5
1998/99	--	--	--	37,792	38,109	--	30,657	7,122	37,779	330	138.5
1999/00	--	--	--	37,591	37,970	--	30,345	7,332	37,678	293	167.7
2000/01*	--	--	--	39,389	39,733	--	31,687	7,662	39,349	383	173.6
2001/02*	--	--	--	40,062	40,505	--	32,480	7,750	40,230	275	150-165

See footnotes at end of table, next page

Table 17—Supply & Utilization (continued)

	Area Planted	Area Harvested	Yield	Production	Total supply [3]	Feed & residual	Other domestic use	Exports	Total use	Ending stocks	Farm price [4]
	Mil. acres		*Lb./acre*				*Mil. bales*				*¢/lb.*
Cotton[8]											
1997/98	13.9	13.4	673	18.8	22.8	--	11.3	7.5	18.8	3.9	65.2
1998/99	13.4	10.7	625	13.9	18.2	--	10.4	4.3	14.7	3.9	60.2
1999/00	14.9	13.4	607	17.0	21.0	--	10.2	6.8	17.0	3.9	45.0
2000/01*	15.5	13.1	632	17.2	21.1	--	8.9	6.8	15.6	6.0	49.8
2001/02*	15.8	13.8	706	20.3	26.3	--	7.5	10.5	18.0	8.3	31.4

-- = Not available or not applicable. *April 10, 2001 Supply and Demand Estimates. 1. Marketing year beginning June 1 for wheat, barley and oats; August 1 for cotton and rice; September 1 for soybeans, corn, and sorghum; October 1 for soymeal and soyoil. 2. Conversion factors: hectare (ha.) = 2.471 acres, 1 metric ton = 2,204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, and 4.59 480-pound bales of cotton. 3. Includes imports. 4. Marketing-year weighted average price received by farmers. Does not include an allowance for loans outstanding and government purchases. 5. Residual included in domestic use. 6. Includes seed. 7. Simple average of 48 percent protein, Decatur. 8. Upland and extra-long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply and use estimates. For 2001/02, cotton price is the average for August 2001-February 2002. USDA is prohibited by law from publishing cotton price projections. *Information contact: Wilma Davis (202) 694-5304*

Table 18—Cash Prices, Selected U.S. Commodities

	Marketing year[1]			2001				2002		
	1999/2000	2000/2001	2001/2002	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Wheat, no. 1 HRW, Kansas City ($/bu.)[2]	2.87	3.30	--	3.45	3.28	3.37	3.26	3.29	3.25	3.23
Wheat, DNS, Minneapolis ($/bu.)[3]	3.65	3.62	--	3.63	3.71	3.69	3.59	3.55	3.51	3.51
Rice, S.W. La. ($/cwt)[4]	12.99	12.46	--	12.72	10.58	10.41	10.29	9.97	9.88	9.81
Corn, no. 2 yellow, 30-day, Chicago ($/bu.)	1.97	1.99	--	2.07	1.98	2.00	2.05	2.06	2.06	2.05
Sorghum, no. 2 yellow, Kansas City ($/cwt)	3.10	3.41	--	3.56	3.38	3.44	3.59	3.61	3.55	3.58
Barley, feed, Duluth ($/bu.)	--	1.47	--	1.50	1.50	1.50	1.54	1.55	1.55	1.55
Barley, malting Minneapolis ($/bu.)	--	2.37	--	2.37	2.42	2.44	2.48	2.48	2.48	2.48
U.S. cotton price, SLM, 1-1/16 in. (¢/lb.)[5]	52.36	51.56	39.68	47.22	28.42	31.23	32.21	32.13	31.60	33.23
Northern Europe prices cotton index (¢/lb.)[6]	52.85	57.25	48.04	54.75	37.35	38.13	42.85	43.39	42.59	42.01
U.S. M 1-3/32 in. (¢/lb.)[7]	59.64	62.54	52.86	61.25	40.63	42.55	43.75	44.65	43.56	46.00
Soybeans, no. 1 yellow, 15-day[8] Central Illinois ($/bu)	4.76	4.61	4.55	4.42	4.26	4.31	4.35	4.35	4.35	4.57
Soybean oil, crude, Decatur (¢/lb.)	20.50	--	13.70	13.90	14.38	15.23	12.38	14.80	14.80	14.75
Soybean meal, high protein, Decatur ($/ton)	165.45	--	172.48	156.32	165.45	166.10	154.20	156.60	153.10	160.50

-- = Not available. 1. Beginning June 1 for wheat and barley; Aug. 1 for rice and cotton; Sept. 1 for corn, sorghum, and soybeans; Oct. 1 for soymeal and oil. 2. Ordinary protein. 3. 14 percent protein. 4. Long grain, milled basis. 5. Average spot market. 6. Liverpool Cotlook "A" Index; average of 5 lowest priced growth. 7. Cotton, Memphis territory growth. 8. Soybean 30-day price discontinued. *Information contact: Wilma Davis (202) 694-5304*

Table 19—Farm Programs, Price Supports, Participation, & Payment Rates

	Marketing assistance loan rate	Marketing loan benefit [1]	Flexibility contract payment rate	Acres under contract	Contract payment yields
				Mil. acres	*Bu./acre*
Wheat		*$/bu.*			
1997/98	2.58	0.01	0.631	76.7	34.70
1998/99	2.58	0.19	0.663	78.9	34.50
1999/2000	2.58	0.41	0.637	79.0	34.50
2000/2001	2.58	--	0.588	78.9	34.50
2001/2002 [2]	2.58	--	0.474	78.2	34.60
					Cwt/acre
Rice		*$/cwt*			
1997/98	6.50	0.00	2.710	4.2	48.17
1998/99	6.50	0.08	2.921	4.2	48.17
1999/2000	6.50	1.94	2.820	4.2	48.15
2000/2001	6.50	--	2.600	4.1	48.15
2001/2002 [2]	6.50	--	2.100	4.1	48.15
					Bu./acre
Corn		*$/bu.*			
1997/98	1.89	0.01	0.486	80.9	102.80
1998/99	1.89	0.14	0.377	82.0	102.60
1999/2000	1.89	0.26	0.363	81.9	102.60
2000/2001	1.89	--	0.334	81.9	102.60
2001/2002 [2]	1.89	--	0.269	81.5	102.70
					Bu./acre
Sorghum		*$/bu.*			
1997/98	1.76	0.00	0.544	13.1	57.30
1998/99	1.74	0.12	0.452	13.6	56.90
1999/2000	1.74	0.26	0.435	13.7	56.90
2000/2001	1.71	--	0.400	13.6	57.00
2001/2002 [2]	1.71	--	0.324	13.5	57.00
					Bu./acre
Barley		*$/bu.*			
1997/98	1.57	0.01	0.277	10.5	47.20
1998/99	1.56	0.23	0.284	11.2	46.70
1999/2000	1.59	0.14	0.271	11.2	46.60
2000/2001	1.62	--	0.251	11.2	46.60
2001/2002 [2]	1.65	--	0.206	11.0	46.60
					Bu./acre
Oats		*$/bu.*			
1997/98	1.11	0.00	0.031	6.2	50.80
1998/99	1.11	0.18	0.031	6.5	50.70
1999/2000	1.13	0.19	0.030	6.5	50.60
2000/2001	1.16	--	0.028	6.5	50.60
2001/2002 [2]	1.21	--	0.022	6.5	50.60
					Bu./acre
Soybeans [3]		*$/bu.*			
1997/98	5.26	0.01	--	--	--
1998/99	5.26	0.45	--	--	--
1999/2000	5.26	0.88	--	--	--
2000/2001	5.26	--	--	--	--
2001/2002	5.26	--	--	--	--
					Lb./acre
Upland cotton		*¢/lb.*			
1997/98	51.92	0.00	7.625	16.2	608.00
1998/99	51.92	0.09	8.173	16.4	604.00
1999/2000	51.92	0.20	7.880	16.4	604.00
2000/2001	51.92	--	7.330	16.3	604.00
2001/2002 [2]	51.92	--	5.990	16.2	605.80

-- = Not available. 1. Weighted average, based on portions of crop receiving marketing loan gains, loan deficiency payments, and no benefits (calculated by Economic Research Service). 2. Estimated payment rates and acres under contract. 3. There are no flexibility contract payments for soybeans.
Information contact: Brenda Chewning, Farm Service Agency (202) 720-8838

Table 20—Fruit

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Citrus[1]										
Production (1,000 tons)	12,452	15,274	14,561	15,799	15,712	17,270	17,770	13,633	17,288	16,300
Per capita consumpt. (lb.)[2]	24.4	26.0	25.0	24.1	25.2	27.5	27.3	21.0	24.5	0.0
Noncitrus[3]										
Production (1,000 tons)	17,124	16,554	17,339	16,348	16,103	18,382	16,545	17,316	18,818	0
Per capita consumpt. (lb.)[2]	73.7	73.8	75.6	73.6	73.9	76.1	76.5	81.6	78.7	0.0

	2000	2001								
	Oct	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Grower prices										
Apples (¢/pound)[4]	21.8	15.2	14.2	15.8	15.4	15.3	14.4	16.9	18.7	24.2
Pears (¢/pound)[4]	18.10	12.55	13.70	15.20	18.20	19.95	28.50	26.65	23.15	20.7
Oranges ($/box)[5]	1.09	3.29	4.13	5.02	4.80	4.30	6.23	5.57	6.53	5.1
Grapefruit ($/box)[5]	5.17	2.07	1.53	1.36	1.94	5.27	8.81	3.69	6.89	5.3
Stocks, ending										
Fresh apples (mil. lb.)	6,348	3,408	2,603	1,891	1,330	898	487	143	2,806	5,365
Fresh pears (mil. lb.)	426	181	113	55	18	0	18	93	554	518
Frozen fruits (mil. lb.)	1,626	1,372	1,270	1,122	1,000	1,046	1,184	1,148	1,102	1,196
Frozen conc.orange juice (mil. single-strength gallons)	477	745	708	768	842	831	781	690	628	574

-- = Not available. 1. Year shown is when harvest concluded. 2. Fresh per capita consumption. 3. Calendar year. 4. Fresh use. 5. U.S. equivalent on-tree returns. *Information contact: Susan Pollack (202) 694-5251*

Table 21—Vegetables

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Production[1]										
Total vegetables (1,000 cwt)	565,754	689,070	692,022	785,798	751,715	765,645	763,532	732,803	834,654	798,773
Fresh (1,000 cwt)[2,4]	242,733	389,597	390,528	416,173	397,125	412,010	436,459	420,012	450,715	454,990
Processed (tons)[3,4]	16,151,030	14,973,630	15,074,707	18,481,238	17,729,497	17,681,732	16,353,639	15,639,548	19,196,942	17,189,152
Mushrooms (1,000 lbs)[5]	746,832	776,357	750,799	782,340	777,870	776,677	808,678	847,760	854,394	838,611
Potatoes (1,000 cwt)	417,622	425,367	430,349	469,425	445,099	499,254	467,091	475,771	478,216	513,621
Sweet potatoes (1,000 cwt)	11,203	12,005	11,027	13,380	12,821	13,216	13,327	12,382	12,234	13,794
Dry edible beans (1,000 cwt)	33,765	22,615	21,862	28,950	30,689	27,912	29,370	30,418	33,085	26,440

	2000	2001								
	Oct	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Shipments (1,000 cwt)										
Fresh	18,197	23,799	20,494	23,645	37,308	30,270	20,761	22,934	15,340	22,433
Iceberg lettuce	3,505	3,517	3,270	3,017	4,626	3,436	3,060	3,773	2,976	4,097
Tomatoes, all	3,164	4,892	3,495	4,294	4,189	3,240	2,271	2,702	2,223	3,396
Dry-bulb onions	4,473	3,774	2,983	3,819	4,563	3,212	3,448	4,311	3,844	4,563
Others[6]	7,055	11,616	10,746	12,515	23,930	20,382	11,982	12,148	6,297	10,377
Potatoes, all	12,433	15,572	14,624	18,926	21,139	12,947	9,646	11,653	10,063	12,646
Sweet potatoes	325	327	242	310	239	189	161	226	266	412

-- = Not available. 1. Calendar year except mushrooms. 2. Includes fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes through 1991. 3. Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, and cauliflower. 4. Data after 1991 not comparable to previous years because commodity estimates reinstated in 1992 are included. 5. Fresh and processing agaricus mushrooms only. Excludes specialty varieties. Crop year July 1 - June 30. 6. Includes snap beans, broccoli, cabbage, cauliflower, celery, sweet corn, cucumbers, eggplant, bell peppers, honeydews, and watermelons. *Information contact: Gary Lucier (202) 694-5253*

Table 22—Other Commodities

	Annual			1999	2000				2001	
	1998	1999	2000	IV	I	II	III	IV	I	II
Sugar										
Production[1]	7,891	9,083	8,912	4,667	2,681	922	772	4,537	2,660	827
Deliveries[1]	9,851	10,167	10,091	2,609	2,348	2,513	2,641	2,589	2,399	2,524
Stocks, ending[1]	3,423	3,855	4,338	3,855	4,551	3,498	2,219	4,338	5,122	3,720
Coffee										
Composite green price[2] N.Y. (¢/lb.)	114.43	88.49	71.94	91.79	85.66	75.78	66.73	59.63	54.95	51.97

	Annual			2000						
	1997	1998	1999	Mar	Apr	May	Jun	Jul	Aug	Sep
Tobacco										
Avg. price to grower[3]										
Flue-cured ($/lb.)	1.73	1.76	1.74	--	--	--	--	--	1.69	1.82
Burley ($/lb.)	1.91	1.90	1.90	1.77	--	--	--	--	--	--
Domestic taxable removals										
Cigarettes (bil.)	471.4	457.9	432.6	38.8	29.3	40.8	39.6	34.2	40.8	33.1
Large cigars (mil.)[4]	3,552	3,721	3,844	333.9	314.0	345.7	365.8	319.6	352.7	314.4

-- = Not available. 1. 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2. Net imports of green and processed coffee. 3. Crop year July-June for flue-cured, October-September for burley. 4. Includes imports of large cigars. *Information contacts: sugar and coffee, Fannye Jolly (202) 694-5249; tobacco, Tom Capehart (202) 694-5245*

World Agriculture

Table 23—World Supply & Utilization of Major Crops, Livestock, & Products

	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01 F	2001/02 F
					Million units					
Wheat										
Area (hectares)	222.9	221.9	214.5	218.7	230.0	228.0	224.7	216.6	218.9	214.7
Production (metric tons)	562.1	558.6	524.0	538.4	581.9	609.2	588.7	585.9	582.3	577.0
Exports (metric tons)[1]	113.1	101.6	101.5	99.1	100.1	104.0	101.9	112.3	102.9	107.2
Consumption (metric tons)[2]	549.8	556.2	546.9	548.4	575.8	583.4	584.3	591.6	589.5	596.0
Ending stocks (metric tons)[3]	170.0	172.4	149.4	139.5	145.6	171.3	175.8	170.0	163.0	144.0
Coarse grains										
Area (hectares)	325.9	318.7	324.0	313.9	322.7	311.2	307.3	300.7	296.4	299.7
Production (metric tons)	871.6	798.9	871.3	802.9	908.5	883.9	889.0	876.5	856.9	873.2
Exports (metric tons) [1]	93.4	86.3	98.4	87.9	91.2	85.6	96.4	104.3	103.9	101.3
Consumption (metric tons) [2]	844.9	838.6	859.6	841.8	875.0	873.4	869.9	881.9	879.5	892.4
Ending stocks (metric tons)[3]	218.7	179.0	190.6	151.8	185.3	195.8	215.0	209.6	187.0	167.7
Rice, milled										
Area (hectares)	146.4	144.9	147.4	148.0	149.8	151.3	152.4	154.9	151.7	150.2
Production (metric tons)	355.7	355.3	364.5	371.5	380.3	386.9	394.1	408.7	397.4	395.2
Exports (metric tons)[1]	14.9	16.5	21.0	19.7	18.9	27.6	24.9	22.8	24.6	23.7
Consumption (metric tons)[2]	358.6	359.2	366.0	372.0	379.0	379.6	387.3	398.1	404.0	406.0
Ending stocks (metric tons)[3]	123.9	120.0	118.5	117.9	119.2	126.5	133.3	143.9	137.3	126.6
Total grains										
Area (hectares)	695.2	685.5	685.9	680.6	702.5	690.5	684.4	672.2	667.0	664.6
Production (metric tons)	1,789.4	1,712.8	1,759.8	1,712.8	1,870.7	1,880.0	1,871.8	1,871.1	1,836.6	1,845.4
Exports (metric tons)[1]	221.4	204.4	220.9	206.7	210.2	217.2	223.2	239.4	231.4	232.2
Consumption (metric tons) [2]	1,753.3	1,754.0	1,772.5	1,762.2	1,829.8	1,836.4	1,841.5	1,871.6	1,873.0	1,894.4
Ending stocks (metric tons) [3]	512.6	471.4	458.5	409.2	450.1	493.6	524.1	523.5	487.3	438.3
Oilseeds										
Crush (metric tons)	184.4	190.1	208.1	217.5	216.7	226.4	240.7	247.7	255.9	266.7
Production (metric tons)	227.5	229.4	261.9	258.9	261.4	286.5	294.7	303.4	313.1	325.1
Exports (metric tons)	38.2	38.7	44.1	44.3	49.6	54.0	54.9	64.6	71.9	71.2
Ending stocks (metric tons)	23.6	20.3	27.2	22.2	19.1	28.6	31.7	34.1	33.9	33.2
Meals										
Production (metric tons)	125.2	131.7	142.1	147.3	147.8	153.9	164.6	168.8	177.0	184.1
Exports (metric tons)	40.8	44.9	46.7	49.8	50.7	52.0	54.1	56.3	56.8	59.0
Oils										
Production (metric tons)	61.1	63.7	69.6	73.1	73.7	75.2	80.6	86.0	89.0	90.8
Exports (metric tons)	21.3	24.3	27.1	26.0	28.3	29.8	31.6	32.9	34.9	35.7
Cotton										
Area (hectares)	32.7	30.7	32.2	36.0	33.8	33.8	33.0	32.3	32.0	34.0
Production (bales)	82.5	77.1	86.0	93.1	89.7	91.8	85.0	87.3	88.5	97.6
Exports (bales)	25.5	26.8	28.4	27.3	26.8	26.7	23.7	27.3	26.3	28.9
Consumption (bales)	85.9	85.4	84.7	86.0	88.1	87.3	85.3	91.8	92.1	92.7
Ending stocks (bales)	34.8	26.8	29.9	36.7	40.3	44.1	45.5	42.2	39.7	44.4
	1993	1994	1995	1996	1997	1998	1999	2000	2001 E	2002 F
Beef and Pork[4]										
Production (metric tons)	111.6	116.7	122.1	116.6	122.1	127.1	130.3	131.1	138.9	134.9
Consumption (metric tons)	110.6	115.7	120.7	114.1	120.5	125.5	129.2	129.9	131.4	133.9
Exports (metric tons)[1]	6.6	7.2	7.4	7.7	8.4	8.1	9.0	9.2	9.3	9.7
Poultry[4]										
Production (metric tons)	40.5	43.2	47.5	50.4	53.7	54.6	57.7	59.7	61.9	62.9
Consumption (metric tons)	39.4	42.0	47.0	49.6	53.1	53.7	56.8	58.8	60.4	61.3
Exports (metric tons) [1]	2.8	3.6	4.5	5.1	5.1	5.2	5.5	5.9	6.8	7.1
Dairy										
Milk production (metric tons)[5]	--	--	--	364.4	365.6	368.4	372.0	375.9	376.3	--

-- = Not available. E = Estimated, F = forecast. 1. Excludes intra-EU trade but includes intra-FSU trade. 2. Where stocks data are not available, consumption includes stock changes. 3. Stocks data are based on differing marketing years and do not represent levels at a given date. Data not available for all countries. 4. Calendar year, selected countries. 5. Data prior to 1989 no longer comparable.

Information contacts: Crops, Ed Allen (202) 694-5288; red meat and poultry, Leland Southard (202) 694-5187; dairy, LaVerne Williams (202) 694-5190

U.S. Agricultural Trade

Table 24—Prices of Principal U.S. Agricultural Trade Products

	Annual			2001				2002		
	1999	2000	2001	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Export commodities										
Wheat, f.o.b. vessel, Gulf ports ($/bu.)	3.04	3.17	3.50	3.40	3.39	3.46	3.37	3.46	3.43	3.40
Corn, f.o.b. vessel, Gulf ports ($/bu.)	2.29	2.24	2.26	2.32	2.19	2.28	2.35	2.34	2.30	2.28
Grain sorghum, f.o.b. vessel, Gulf ports ($/bu.)	2.14	2.23	2.39	2.43	2.40	2.41	2.46	2.43	2.35	2.34
Soybeans, f.o.b. vessel, Gulf ports ($/bu.)	5.02	5.26	4.93	4.85	4.46	4.73	4.75	4.75	4.73	4.85
Soybean oil, Decatur (¢/lb.)	17.51	15.01	14.49	14.75	14.38	15.23	15.10	14.82	14.15	14.75
Soybean meal, Decatur ($/ton)	141.52	174.69	168.49	160.49	165.45	166.10	154.18	158.01	153.11	160.49
Cotton, 7-market avg. spot (¢/lb.)	52.30	57.47	39.68	33.23	28.42	31.23	32.21	32.13	31.60	33.23
Tobacco, avg. price at auction (¢/lb.)	177.82	182.73	186.66	139.04	190.58	198.03	199.53	192.51	187.45	139.04
Rice, f.o.b., mill, Houston ($/cwt)	16.99	14.83	14.55	15.00	14.00	13.75	12.75	12.75	12.25	11.79
Inedible tallow, Chicago (¢/lb.)	12.99	9.92	12.50	8.90	11.18	--	10.50	9.50	10.80	11.28
Import commodities										
Coffee, N.Y. spot ($/lb.)	1.05	0.92	0.55	0.48	0.38	0.42	0.42	0.43	0.43	0.48
Rubber, N.Y. spot (¢/lb.)	36.66	37.72	33.88	36.66	31.97	31.14	30.35	32.21	34.42	36.66
Cocoa beans, N.Y. ($/lb.)	0.47	0.36	0.47	0.69	0.47	0.54	0.59	0.61	0.65	0.69

-- = Not available. *Information contact: Wilma Davis (202) 694-5304*

Table 25—Trade Balance

	Fiscal year			2001					2002	
	2000	2001	2002 F	Feb	Sep	Oct	Nov	Dec	Jan	Feb
					$ million					
Exports										
Agricultural	50,744	52,735	54,500	4,532	3,888	5,249	5,257	4,682	4,686	4,658
Nonagricultural	650,907	639,131	--	53,119	46,489	50,093	47,872	45,555	43,028	42,111
Total [1]	701,651	691,866	--	57,651	50,377	55,342	53,129	50,237	47,714	46,769
Imports										
Agricultural	38,857	39,022	40,000	3,062	3,038	3,514	3,364	3,143	3,406	3,169
Nonagricultural	1,128,911	1,136,645	--	87,821	85,796	96,659	87,817	78,480	81,370	80,227
Total [2]	1,167,768	1,175,667	--	90,883	88,834	100,173	91,181	81,623	84,776	83,396
Trade balance										
Agricultural	11,887	13,713	14,500	1,470	850	1,735	1,893	1,539	1,280	1,489
Nonagricultural	-478,004	-497,514	--	-34,702	-39,307	-46,566	-39,945	-32,925	-38,342	-38,116
Total [3]	-466,117	-483,801	--	-33,232	-38,457	-44,831	-38,052	-31,386	-37,062	-36,627

F = Forecast. -- = Not available. Fiscal year (Oct. 1-Sep. 30). 1. Domestic exports including Department of Defense shipments (f.a.s. value). 2. Imports for consumption (customs value). 3. Preliminary. *Information contact: Mary Fant (202) 694-5272.*

Table 26—Indexes of Real Trade-Weighted Dollar Exchange Rates[1]

	Annual			2001					2002	
	1999	2000	2001	Aug	Sep	Oct	Nov	Dec	Jan	Feb
					1995 = 100					
Total U.S. Trade	114.2	119.0	129.2	127.6	130.6	130.6	130.8	131.5	132.0	132.8
U.S. markets										
All agricultural trade	117.5	120.2	132.3	130.2	133.5	133.4	133.7	135.5	135.7	136.4
Bulk commodities	116.6	121.2	135.4	133.2	136.9	136.6	136.8	138.6	138.7	139.3
Corn	116.3	119.2	136.5	134.1	138.6	138.2	138.5	141.8	142.1	143.0
Cotton	112.4	118.3	130.6	129.1	131.8	132.0	131.1	131.4	130.9	130.9
Rice	112.5	117.8	129.8	128.2	131.8	131.7	131.6	132.5	131.0	131.0
Soybeans	119.4	127.3	138.2	135.8	138.4	138.1	139.0	140.1	140.5	141.3
Tobacco, raw	112.8	134.3	145.3	140.9	145.1	145.6	146.2	147.4	147.0	147.5
Wheat	124.6	120.2	139.6	137.9	143.0	142.3	142.1	144.5	144.6	145.6
High-value products	118.3	119.4	129.8	127.8	130.8	130.9	131.3	132.9	133.4	134.0
Processed intermediates	115.1	120.2	132.3	130.6	133.6	133.3	133.5	134.4	134.7	135.5
Soymeal	107.2	117.0	146.3	147.8	151.1	150.2	149.7	149.8	149.4	152.0
Soyoil	98.1	105.2	109.7	108.9	110.8	110.1	109.8	109.4	109.2	109.1
Produce and horticulture	117.3	122.0	131.1	128.6	131.8	132.3	133.0	134.4	135.0	135.8
Fruits	116.8	119.2	129.6	127.0	130.7	131.2	131.7	133.7	134.1	134.7
Vegetables	113.6	114.4	121.7	119.9	123.2	124.0	124.2	126.2	126.5	127.4
High-value processed	121.4	117.8	127.3	125.2	128.2	128.4	128.9	131.2	131.7	132.2
Fruit juices	120.1	123.4	132.7	129.8	133.1	133.8	134.6	136.9	137.7	138.7
Poultry	155.0	116.9	116.9	117.4	117.1	116.5	116.2	116.2	116.4	116.2
Red meats	124.0	121.7	135.8	131.4	135.8	136.9	138.1	143.7	144.4	145.1
U.S. competitors										
All agricultural trade	122.1	135.5	142.3	139.2	141.8	141.9	142.6	141.6	143.1	144.0
Bulk commodities	130.4	134.0	140.9	138.7	141.6	141.9	141.0	139.8	142.0	142.6
Corn	120.5	134.0	140.6	137.7	139.9	140.3	142.6	143.4	151.9	154.3
Cotton	130.7	133.4	129.7	127.8	132.0	130.4	129.4	128.8	133.2	133.6
Rice	120.5	131.1	143.4	140.7	144.4	144.0	142.9	143.2	143.5	143.9
Soybeans	132.1	134.6	151.6	143.7	161.5	162.9	157.6	151.5	163.3	166.7
Tobacco, raw	127.3	121.8	123.7	124.9	125.4	124.2	119.5	115.1	113.0	112.0
Wheat	118.5	129.8	136.6	134.3	137.3	136.9	137.2	137.2	140.8	141.9
High-value products	125.2	139.1	145.6	142.1	145.1	145.1	145.9	144.9	146.5	147.6
Processed intermediates	127.1	138.2	145.9	142.4	146.5	146.6	146.5	145.4	147.9	148.9
Soymeal	132.0	136.9	152.4	145.6	160.5	161.5	156.4	150.6	161.0	164.0
Soyoil	123.3	130.0	142.2	137.0	147.0	147.9	146.2	142.8	153.9	156.7
Produce and horticulture	120.0	133.3	137.5	134.7	136.5	136.4	137.5	136.8	137.6	138.3
Fruits	123.5	135.9	145.5	142.8	145.6	145.5	145.3	145.1	144.8	145.0
Vegetables	109.2	121.7	125.3	123.4	124.6	124.1	124.9	124.3	124.5	125.0
High-value processed	125.7	141.3	147.8	144.1	146.8	146.8	148.1	147.1	148.4	149.6
Fruit juices	122.1	137.0	144.9	141.3	144.8	144.8	145.9	145.5	146.5	147.5
Poultry	121.6	134.9	144.2	140.3	145.3	145.6	145.4	143.0	143.8	144.8
Red meats	122.3	137.8	145.6	141.9	146.1	145.5	145.9	145.0	148.4	149.5
U.S. suppliers										
All agricultural trade	113.5	120.0	125.9	124.5	127.3	127.1	126.3	125.3	125.6	125.8
High-value products	111.6	118.2	123.0	121.6	124.4	123.8	123.5	122.8	123.5	123.8
Processed intermediates	114.8	121.4	127.3	125.2	128.6	128.4	128.2	127.9	128.4	128.9
Grains and feeds	113.0	117.9	124.4	122.8	125.8	126.0	126.0	126.6	126.7	127.5
Vegetable oils	120.9	130.1	138.2	135.0	139.0	139.2	139.0	138.1	137.9	138.3
Produce and horticulture	101.1	103.7	104.3	105.0	105.9	104.7	103.9	102.5	102.2	101.8
Fruits	97.2	98.0	102.7	101.2	106.8	106.1	104.0	102.1	103.0	102.3
Vegetables	84.1	81.3	79.2	81.6	80.5	78.5	78.3	77.4	77.1	76.4
High-value processed	114.9	123.7	130.1	127.9	131.4	131.0	130.9	130.3	131.7	132.4
Cocoa and products	126.1	137.6	143.1	141.1	142.5	143.8	143.4	142.1	142.5	142.9
Coffee and products	111.6	116.4	124.4	124.2	127.7	127.1	124.8	122.1	121.0	121.4
Dairy products	122.5	137.9	143.8	140.3	143.6	142.4	143.9	142.8	144.1	144.9
Fruit juices	122.3	127.8	139.2	134.3	144.8	145.0	141.8	138.1	144.7	146.2
Meats	105.6	115.4	127.7	125.9	129.8	128.9	128.6	128.5	129.7	130.1

Real indexes adjust nominal exchange rates for relative rates of inflation among countries. A higher value means the dollar has appreciated. The weights used for "total U.S. trade" index are based on U.S. total merchandise exports to the largest 85 trading partners. Weights are based on relative importance of major U.S. customers, competitors in world markets, and suppliers to the U.S. Indexes are subject to revision for up to 1 year due to delayed reporting by some countries. High-value products are total agricultural products minus bulk commodities.
Source: Nominal exchange rates are obtained from the IMF International Financial Statisitics. Exchange rates for the EU are obtained from the Board of Governors of the Federal Reserve System. Full historical series are available back to January 1970 at http://usda.mannlib.cornell.edu/data-sets/international/88021/
1. A major revision to the weighting scheme and commodity definitions was completed in May 2000. This significantly altered the series from previous versions.
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Table 27—U.S. Agricultural Exports & Imports

	Fiscal year			Feb		Fiscal year			Feb	
	2000	2001	2002 F	2001	2002	2000	2001	2002 F	2001	2002
	1,000 units					*$ million*				
Exports										
Animals, live	--	--	--	--	--	609	727	--	31	32
Meats and preps., excl. poultry (mt) [1]	2,439	2,454	1,900	191	201	5,429	5,199	4,800	410	385
Dairy products	--	--	--	--	--	998	1,118	1,100	78	76
Poultry meats (mt)	2,781	3,089	3,200	244	234	1,943	2,218	2,300	157	155
Fats, oils, and greases (mt)	1,207	1,046	1,000	81	105	421	319	--	26	35
Hides and skins, incl. furskins	--	--	--	--	--	1,428	1,943	2,100	154	138
Cattle hides, whole	--	--	--	--	--	1,117	1,446	--	109	79
Mink pelts (no.)	4,352	4,277	--	695	655	111	122	--	17	14
Grains and feeds (mt) [2]	103,653	98,844	--	8,041	8,272	13,789	13,830	14,400	1,175	1,156
Wheat (mt) [3]	27,838	25,187	26,000	2,312	1,722	3,384	3,238	3,600	304	239
Wheat flour (mt)	837	496	600	43	51	134	107	--	9	14
Rice (mt)	3,307	3,158	3,200	210	291	905	778	700	54	65
Feed grains, incl. products (mt) [4]	57,199	55,791	57,300	4,378	4,874	5,483	5,460	5,600	446	498
Feeds and fodders (mt)	12,951	12,741	12,500	995	1,192	2,483	2,775	2,800	250	220
Other grain products (mt)	1,521	1,472	--	103	142	1,400	1,471	--	112	121
Fruits, nuts, and preps. (mt)	3,748	3,969	--	330	326	3,877	4,097	4,800	280	308
Fruit juices, incl. froz. (1,000 hectoliters)	11,899	10,785	--	759	705	715	681	--	47	45
Vegetables and preps.	--	--	--	--	--	4,440	4,513	3,100	347	350
Tobacco, unmanufactured (mt)	180	176	200	24	24	1,227	1,181	1,400	140	137
Cotton, excl. linters (mt) [5]	1,473	1,656	2,200	134	240	1,809	2,080	2,200	183	227
Seeds (mt)	720	703	--	82	62	772	727	700	86	75
Sugar, cane or beet (mt)	113	98	--	6	6	40	38	--	2	2
Oilseeds and products (mt)	36,053	37,093	39,500	4,488	4,973	8,391	8,708	9,200	999	1,146
Oilseeds (mt)	--	--	--	--	--	--	--	--	--	--
Soybeans (mt)	26,045	26,659	28,000	3,464	3,618	5,071	5,106	5,100	655	659
Protein meal (mt)	6,867	7,186	--	701	891	1,258	1,419	--	144	164
Vegetable oils (mt)	2,134	2,067	--	197	336	1,349	1,175	--	103	176
Essential oils (mt)	53	55	--	4	6	592	675	--	50	63
Other	--	--	--	--	--	4,264	4,679	--	366	328
Total	--	--	--	--	--	50,744	52,735	54,500	4,532	4,658
Imports										
Animals, live	--	--	--	--	--	1,735	2,198	2,300	148	188
Meats and preps., excl. poultry (mt)	1,555	1,600	1,700	115	106	3,723	4,091	4,400	299	276
Beef and veal (mt)	1,027	1,056	--	75	61	2,405	2,645	--	191	167
Pork (mt)	402	399	--	30	34	958	1,038	--	78	78
Dairy products	--	--	--	--	--	1,653	1,727	1,700	115	118
Poultry and products	--	--	--	--	--	287	258	--	19	27
Fats, oils, and greases (mt)	105	107	--	8	8	69	63	--	5	5
Hides and skins, incl. furskins (mt)	--	--	--	--	--	160	162	--	15	14
Wool, unmanufactured (mt)	25	21	--	3	1	66	53	--	6	2
Grains and feeds	--	--	--	--	--	3,038	3,187	3,500	217	253
Fruits, nuts, and preps., excl. juices (mt) [6]	8,367	8,123	8,300	707	758	4,545	4,615	5,400	405	455
Bananas and plantains (mt)	4,396	4,093	4,100	318	315	1,128	1,156	1,200	88	90
Fruit juices (1,000 hectoliters)	32,226	29,284	28,000	2,138	2,063	783	649	--	47	48
Vegetables and preps.	--	--	--	--	--	4,660	5,182	5,400	468	507
Tobacco, unmanufactured (mt)	220	211	300	21	26	651	649	800	69	69
Cotton, unmanufactured (mt)	34	49	--	4	3	28	23	--	2	4
Seeds (mt)	458	316	--	23	23	503	444	--	34	30
Nursery stock and cut flowers	--	--	--	--	--	1,165	1,156	1,200	126	113
Sugar, cane or beet (mt)	1,368	1,382	--	128	102	484	528	--	52	38
Oilseeds and products (mt)	4,062	4,068	3,900	350	250	1,860	1,676	1,800	134	113
Oilseeds (mt)	1,090	988	--	42	31	298	267	--	13	11
Protein meal (mt)	1,205	1,150	--	119	65	152	152	--	13	9
Vegetable oils (mt)	1,767	1,930	--	189	153	1,410	1,257	--	108	93
Beverages, excl. fruit juices (1,000 hectoliters)	--	--	--	--	--	4,701	4,991	--	320	369
Coffee, tea, cocoa, spices (mt)	2,841	2,489	--	226	187	5,218	3,978	--	331	291
Coffee, incl. products (mt)	1,411	1,213	1,200	101	82	2,906	1,761	1,600	136	105
Cocoa beans and products (mt)	1,045	898	1,000	97	74	1,465	1,390	1,500	129	126
Rubber and allied gums (mt)	1,249	1,059	1,000	71	73	841	668	600	49	38
Other	--	--	--	--	--	2,686	2,725	--	203	208
Total	--	--	--	--	--	38,857	39,022	40,000	3,062	3,169

F = Forecast. -- = Not available. Projections are fiscal years (Dec.1 through Sep. 30) and are from Outlook for U.S. Agricultural Exports. 2000 and 2001 data are from *Foreign Agricultural Trade of the U.S*. 1. Projection includes beef, pork, and variety meat. 2. Projection includes pulses. 3. Value projection includes wheat flour. 4. Projection excludes grain products. 5. Projection includes linters. 6. Value projection includes juice.

Information contact: Mary Fant (202) 694-5272.

Table 28—U.S. Agricultural Exports by Region

	Fiscal year			2001					2002	
	2000	2001	2002 F	Feb	Sep	Oct	Nov	Dec	Jan	Feb
						$ million				
Region and country										
Western Europe	6,532	6,771	7,000	717	397	734	929	774	734	814
European Union [1]	6,193	6,259	6,600	664	382	699	724	728	667	710
Belgium-Luxembourg	514	625	--	45	46	57	80	54	59	78
France	348	352	--	48	20	38	36	68	61	36
Germany	910	906	--	97	55	113	72	87	105	91
Italy	559	508	--	68	46	70	58	70	42	92
Netherlands	1,388	1,397	--	162	59	125	183	167	142	156
United Kingdom	1,028	1,049	--	80	80	93	129	108	72	92
Portugal	134	138	--	18	4	18	22	20	40	21
Spain, incl. Canary Islands	641	591	--	82	32	99	91	86	93	88
Other Western Europe	340	512	400	53	16	35	205	46	66	105
Switzerland	250	422	--	47	8	25	197	38	62	99
Eastern Europe	168	190	200	21	10	14	30	34	16	22
Poland	47	83	--	8	4	5	6	12	3	4
Former Yugoslavia	67	34	--	6	1	2	12	13	3	6
Romania	12	24	--	3	1	2	4	4	5	7
Former Soviet Union	921	1,029	1,300	61	95	128	131	87	105	80
Russia	659	823	1,100	45	81	96	113	69	91	68
Asia	21,917	22,313	23,100	1,967	1,600	2,186	2,075	1,922	1,989	1,947
West Asia (Mideast)	2,364	2,194	2,100	187	160	310	207	194	203	264
Turkey	701	569	600	30	38	81	56	37	72	81
Iraq	8	8	--	3	--	--	--	--	--	--
Israel, incl. Gaza and W. Bank	459	436	--	36	22	48	30	51	54	47
Saudi Arabia	481	470	500	40	41	22	31	36	18	52
South Asia	415	571	700	32	59	90	83	92	66	66
Bangladesh	82	105	--	13	7	28	13	16	8	22
India	185	294	--	9	34	40	40	42	26	24
Pakistan	93	97	--	2	10	13	19	25	28	19
China	1,465	1,884	2,300	252	74	220	228	182	264	220
Japan	9,301	8,952	9,000	737	652	773	757	682	756	666
Southeast Asia	2,580	2,922	2,900	291	187	290	288	247	231	283
Indonesia	675	879	900	89	62	96	46	67	34	96
Philippines	866	836	800	72	52	67	90	56	83	61
Other East Asia	5,791	5,791	6,100	468	467	502	512	525	470	448
Korea, Rep.	2,531	2,551	2,800	209	204	202	233	239	247	238
Hong Kong	1,249	1,253	1,300	95	107	126	118	99	77	83
Taiwan	2,002	1,981	2,000	163	156	175	161	186	146	127
Africa	2,236	2,125	2,100	208	204	208	226	181	186	218
North Africa	1,522	1,467	1,500	161	149	129	181	123	127	159
Morocco	139	120	--	6	8	4	9	17	27	13
Algeria	254	211	--	31	18	26	28	25	19	23
Egypt	1,056	1,008	1,100	112	106	89	132	71	59	111
Sub-Sahara	715	659	600	47	55	79	45	58	60	59
Nigeria	160	233	--	12	23	26	13	23	21	28
S. Africa	165	108	--	7	7	7	5	8	6	11
Latin America and Caribbean	10,614	11,564	11,600	918	891	1,091	1,022	971	931	885
Brazil	253	219	200	11	14	23	22	23	18	19
Caribbean Islands	1,463	1,399	1,300	110	109	134	138	112	120	121
Central America	1,132	1,185	1,100	93	95	108	139	99	94	86
Colombia	427	442	400	32	34	39	30	44	48	35
Mexico	6,307	7,283	7,600	599	570	696	605	604	577	544
Peru	200	182	--	16	17	27	17	18	14	19
Venezuela	405	416	400	24	26	33	34	29	22	24
Canada	7,512	7,989	8,500	597	622	765	731	651	682	647
Oceania	487	471	500	43	41	51	46	35	44	43
Total	50,744	52,735	54,500	4,532	3,888	5,249	5,257	4,682	4,686	4,658

F = Forecast. -- = Not available. Based on fiscal year beginning Oct. 1 and ending Sep. 30. 1. Austria, Finland, and Sweden are included in the European Union. Note: Adjusted for transhipments through Canada for 1998 and 1999 through December 1999, transhipments are not distributed by country for 2001 and 2002, but are only included in total. *Information contact: Mary Fant (202) 694-5272.*

Farm Income

Table 29—Value Added to the U.S. Economy by the Agricultural Sector

		1998	1999	2000	2001F	01/07/02 2002F	1992-2001 average
				$ billion			
	Final crop output	101.5	93.2	95.3	97.3	98.9	98.3
	Food grains	8.8	7.0	6.6	6.5	6.6	8.7
	Feed crops	22.7	19.6	20.0	20.9	21.9	22.3
	Cotton	6.1	4.7	4.6	4.4	3.7	5.7
	Oil crops	17.4	13.6	13.9	14.1	14.7	15.2
	Tobacco	2.8	2.3	2.3	2.1	2.1	2.6
	Fruits and tree nuts	11.6	12.3	12.7	13.0	13.3	11.7
	Vegetables	15.2	15.2	15.9	16.2	16.4	14.6
	All other crops	17.2	17.9	18.2	18.7	19.0	16.2
	Home consumption	0.1	0.1	0.1	0.1	0.2	0.1
	Value of inventory adjustment[1]	-0.3	0.4	1.0	1.3	0.9	--
	Final animal output	94.2	95.3	99.3	106.0	106.8	94.0
	Meat animals	43.3	45.6	53.0	53.1	53.8	47.9
	Dairy products	24.1	23.2	20.6	24.7	22.4	21.5
	Poultry and eggs	22.9	22.9	21.8	24.2	26.1	20.7
	Miscellaneous livestock	3.7	3.8	4.1	4.1	4.1	3.5
	Home consumption	0.3	0.4	0.4	0.4	0.4	0.4
	Value of inventory adjustment[1]	-0.3	-0.6	-0.6	-0.5	0.0	--
	Services and forestry	23.7	25.4	24.0	24.2	24.2	21.1
	Machine hire and customwork	2.2	2.0	2.2	2.3	2.3	2.1
	Forest products sold	3.1	2.7	2.8	2.8	2.8	2.7
	Other farm income	8.7	10.2	8.7	8.7	8.5	6.8
	Gross imputed rental value of farm dwellings	9.8	10.4	10.4	10.5	10.6	9.5
	Final agricultural sector output [2]	219.5	213.8	218.6	227.5	229.9	213.4
Minus	Intermediate consumption outlays:	118.6	119.6	122.4	126.6	127.8	113.0
	Farm origin	44.8	45.6	47.7	49.6	50.6	44.0
	Feed purchased	25.0	24.5	24.5	26.3	28.3	24.0
	Livestock and poultry purchased	12.6	13.8	15.8	15.5	14.5	13.7
	Seed purchased	7.2	7.2	7.3	7.8	7.8	6.3
	Manufactured inputs	28.2	27.1	28.7	29.4	28.8	26.8
	Fertilizers and lime	10.6	9.9	10.0	11.1	10.6	9.9
	Pesticides	9.0	8.6	8.5	8.5	8.6	8.0
	Petroleum fuel and oils	5.6	5.6	7.2	6.7	6.5	5.9
	Electricity	2.9	3.0	3.0	3.1	3.1	2.9
	Other intermediate expenses	45.6	46.9	46.0	47.7	48.4	42.2
	Repair and maintenance of capital items	10.4	10.5	10.8	11.2	11.6	10.0
	Machine hire and customwork	5.4	5.3	5.0	5.2	5.2	4.8
	Marketing, storage, and transportation	6.9	7.3	7.5	7.9	8.0	6.8
	Contract labor	2.4	2.5	2.7	2.8	2.9	2.2
	Miscellaneous expenses	20.6	21.4	20.0	20.6	20.7	18.4
Plus	Net government transactions:	4.9	14.2	15.5	13.7	3.1	5.9
	+ Direct government payments	12.4	21.5	22.9	21.1	10.7	13.0
	- Motor vehicle registration and licensing fees	0.5	0.4	0.5	0.5	0.5	0.4
	- Property taxes	7.0	6.8	6.9	6.9	7.1	6.7
	Gross value added	105.7	108.4	111.7	114.6	105.3	106.3
Minus	Capital consumption	20.0	20.3	20.6	20.2	20.4	19.4
	Net value added [2]	85.8	88.1	91.1	94.4	84.9	86.8
Minus	Factor payments:	42.9	43.8	44.7	45.1	44.3	40.4
	Employee compensation (total hired labor)	16.9	17.5	17.3	18.1	18.7	15.4
	Net rent received by nonoperator landlords	12.7	12.8	13.2	12.4	11.5	12.2
	Real estate and non-real estate interest	13.4	13.6	14.1	14.6	14.1	12.8
	Net farm income[2]	42.9	44.3	46.4	49.3	40.6	46.4

F = forecast. P = preliminary. -- = not available. Numbers may not add due to rounding. 1. A positive value of inventory change represents current-year production not sold by December 31. A negative value is an offset to production from prior years included in current-year sales. 2. Final sector output is the gross value of commodities and services produced within a year. Net value added is the sector's contribution to the National economy. Net farm income is farm operators' share of income from the sector's production activities. The concepts presented are consistent with those employed by the Organization for Economic Cooperation and Development (OECD).

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To confirm that this table contains the current forecast, go to http://www.ers.usda.gov/data/farmincome/finfidmu.htm

Table 30—Farm Income Statistics

	1998	1999	2000	2001F	2002F	1992-2001 avg.
			$ billion			
Cash income statement						
1. Cash receipts	195.8	188.1	193.6	201.9	204.3	190.5
Crops[1]	101.7	92.6	94.1	95.8	97.9	96.9
Livestock	94.1	95.5	99.5	106.1	106.4	93.6
2. Direct Government payments[2]	12.4	21.5	22.9	21.1	10.7	13.0
3. Farm-related income[3]	13.9	15.0	13.6	13.7	13.6	11.6
4. Gross cash income (1+2+3)	222.1	224.6	230.1	236.7	228.6	215.2
5. Cash expenses [4]	167.4	168.9	172.6	177.2	177.6	159.0
6. Net cash income[5] (4-5)	54.8	55.7	57.5	59.5	50.9	56.1
Farm income statement						
7. Gross cash income (1+2+3)	222.1	224.6	230.1	236.7	228.6	215.2
8. Noncash income [6]	10.3	10.9	11.0	11.1	11.2	10.0
9. Value of inventory adjustment	-0.6	-0.2	0.5	0.9	0.9	--
10. Gross farm income (7+8+9)	231.8	235.3	241.5	248.6	240.6	226.4
11. Total production expenses	189.0	191.0	195.1	199.4	200.0	180.0
12. Net farm income (10-11)	42.9	44.3	46.4	49.3	40.6	46.4

F = forecast. P = preliminary. Numbers may not add due to rounding. 1. Includes commodities placed under CCC loans and profits made on loans redeemed. 2. Direct government payments include only payments made directly to farmers, including realized marketing loan gains. In publications prior to May of 2001, marketing loan gains were included in cash receipts rather than in government payments. 3. Income from custom labor, machine hire, recreational activities, forest product sales, and other farm sources. 4. Excludes depreciation and perquisites to hired labor. 5. Excludes farm operator dwellings. 6. Value of farm products consumed on farms where produced plus the imputed rental value of farm dwellings. 6. Value of farm products consumed on farms where produced plus the imputed rental value of farm dwellings.

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The current farm income forecast and historical statistics can always be found at http://www.ers.usda.gov/Briefing/FarmIncome/

To confirm that this table contains the current forecast, go to http://www.ers.usda.gov/data/farmincome/finfidmu.htm

Table 31—Average Income to Farm Operator Households[1]

	1998	1999	2000[2]	2001F	2002F
			Dollars per farm		
Net cash farm business income [3]	14,357	13,194	11,175	10,888	8,006
Less depreciation[4]	7,409	7,027	7,357	--	--
Less wages paid to operator [5]	637	499	608	--	--
Less farmland rental income [6]	543	802	757	--	--
Less adjusted farm business income due to other household(s)[7]	1,332	1,262	801	--	--
			Dollars per farm operator household		
Equals adjusted farm business income	4,436	3,603	*1,652	--	--
Plus wages paid to operator	637	499	608	--	--
Plus net income from farmland rental [8]	868	1,312	n.a.	--	--
Equals farm self-employment income	5,941	5,415	*2,260	--	--
Plus other farm-related earnings[9]	1,165	944	339	--	--
Equals earnings of the operator household from farming activities	7,106	6,359	2,598	2,447	-198
Plus earnings of the operator household from off-farm sources[10]	52,628	57,988	59,349	59,943	59,343
Equals average farm operator household income comparable to U.S. average household income, as measured by the CPS	59,734	64,347	61,947	62,390	59,145
			Dollars per U.S. household		
U.S. average household income [11]	51,855	54,842	57,045	--	--
			Percent		
Average farm operator household income as percent of U.S. average household income	115.2	117.3	108.6	--	--
Average operator household earnings from farming activities as percent of average operator household income	11.9	9.9	4.2	--	--

P=preliminary. F = forecast. -- = Not available. * = The relative standard error exceeds 25 percent, but is no more than 50 percent.

1. This table derives farm operator household income estimates from the Agricultural Resource Management Study (ARMS) that are consistent with Current Population Survey (CPS) methodology. The CPS, conducted by the Census Bureau, is the source of official U.S. household income statistics. The CPS defines income to include any income received as cash. The CPS definition departs from a strictly cash concept by including depreciation as an expense that farm operators and other self-employed people subtract from gross receipts when reporting net cash income. 2. Prior to 2000, net cash income from operating another farm and net cash income from farm land rental were included in earnings from farming activities. However, because of a change in the ARMS survey design, net cash income from a farm other than the one being surveyed and net cash income from farm land rental are not separable from total off-farm income. Although there is no effect upon estimates of farm operator household income in 2000, estimates of farm self-employment, other farm related earnings, earnings of the household from farming activities, and earnings of the farm from off-farm sources are not strictly comparable to those from previous years.
3. A component of farm sector income. Excludes incomes of contractors and landlords as well as the income of farms organized as nonfamily corporations or cooperatives and farms run by a hired manager. Includes the income of farms organized as proprietorships, partnerships, and family corporations.
4. Consistent with the CPS definition of self-employment income, reported depreciation expenses are subtracted from net cash income. The ARMS collects farm business depreciation used for tax purposes. 5. Wages paid to the operator are subtracted here because they are not shared among other households that have claims on farm business income. These wages are added to the operator household's adjusted farm business income to obtain farm self-employment income.
6. Gross rental income is subtracted here because net rental income from the farm operation is added below to income received by the household. 7. More than one household may have a claim on the income of a farm business. On average, 1.1 households share the income of a farm business. 8. Includes net rental income from the business. Also includes net rental income from farmland held by household members that is not part of the farm business. Beginning in 2000, net income from farmland rental is considered as part of off-farm income. (See footnote 2.) 9. Wages paid to other operator household members by the farm business and net income from a farm business other than the one being surveyed. In 2000, however, net income from a farm business other than the one being surveyed is included in off-farm earnings. (See footnote 2.) Beginning in 1996, also includes the value of commodities provided to household members for farm work.
10. Wages, salaries, net income from nonfarm businesses, interest, dividends, transfer payments, etc. Beginning in 2000, also includes net cash income from another farm and net cash income from farm rental. (See footnote 2.) 11. From the CPS.

Sources: U.S. Dept. of Agriculture, Economic Research Service, 1998, 1999, and 2000 Agricultural Resource Management Study (ARMS) for farm operator household data. U.S. Dept. of Commerce, Bureau of the Census, Current Population Survey (CPS), for U.S. average household income.

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Table 32—Balance Sheet of the U.S. Farming Sector

	1998	1999	2000	2001F	2002F
			$ billion		
Farm assets	1,085.3	1,140.8	1,188.3	1,216.6	1,228.1
Real estate	840.4	886.4	929.5	957.3	968.8
Livestock and poultry [1]	63.4	73.2	76.8	76.3	77.7
Machinery and motor vehicles	91.7	92.3	92.0	92.0	93.0
Crops stored [2,3]	29.9	28.3	27.9	29.2	28.0
Purchased inputs	5.0	4.0	4.9	4.6	4.6
Financial assets	54.8	56.6	57.1	57.1	56.0
Total farm debt	172.9	176.4	184.0	192.8	196.5
Real estate debt [3]	89.6	94.2	97.5	103.1	104.6
Non-real estate debt [4]	83.2	82.2	86.5	89.8	91.9
Total farm equity	912.4	964.4	1,004.3	1,023.8	1,031.6
			Percent		
Selected ratios					
Debt to equity	18.9	18.3	18.3	18.8	19.1
Debt to assets	15.9	15.5	15.5	15.8	16.0

F = forecast. P = preliminary. Numbers may not add due to rounding. 1. As of December 31. 2. Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3. Includes CCC storage and drying facilities loans, but excludes debt on operator dwellings. 4. Excludes debt for nonfarm purposes.

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Note: The current farm income and balance sheet forecasts can always be found at http://www.ers.usda.gov/Briefing/FarmIncome/

Table 33—Cash Receipts from Farming

	Annual			2001						2002
	1999	2000	2001	Jan	Aug	Sep	Oct	Nov	Dec	Jan
					$ million					
Commodity cash receipts[1]	188,132	193,586	201,402	17,863	16,196	17,900	22,358	19,954	17,396	17,369
Livestock and products	95,547	99,473	104,615	8,639	8,921	8,643	9,452	8,302	7,937	8,469
Meat animals	45,614	52,994	52,533	4,794	4,281	4,155	4,944	3,708	3,991	4,431
Dairy products	23,207	20,622	24,423	1,862	2,160	2,180	2,098	1,881	1,835	1,937
Poultry and eggs	22,898	21,789	23,656	1,681	2,196	1,943	2,165	2,119	1,872	1,807
Other	3,828	4,067	4,004	301	284	365	245	594	238	293
Crops	92,585	94,113	96,787	9,224	7,275	9,257	12,906	11,652	9,460	8,900
Food grains	6,965	6,639	6,672	672	685	689	568	475	492	612
Feed crops	19,622	19,960	22,416	3,217	1,735	1,972	2,927	2,699	2,323	2,976
Cotton (lint and seed)	4,698	4,555	6,134	670	116	171	999	1,847	1,262	541
Tobacco	2,273	2,315	1,874	238	362	354	99	280	228	251
Oil-bearing crops	13,608	13,857	14,049	1,801	459	1,393	3,907	1,492	1,014	1,650
Vegetables and melons	15,236	15,889	15,985	883	1,615	1,836	1,496	1,145	973	1,060
Fruits and tree nuts	12,287	12,692	11,785	612	1,310	1,183	1,231	1,499	1,391	676
Other	17,894	18,206	17,872	1,131	992	1,658	1,679	2,216	1,775	1,135
Government payments	21,513	22,896	--	1,711	--	--	--	--	--	--
Total	209,645	216,482	201,402	19,574	16,196	17,900	22,358	19,954	17,396	17,369

-- = Not available. Annual values for the most recent year and monthly values for current year are preliminary and were estimated as of the 20th of the month prior to publication. 1. Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realized on redemptions during the period.

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Table 34—Cash Receipts from Farm Marketings, by State

Region and State	Livestock and products				Crops[1]				Total[1]			
	Annual		Dec	Jan	Annual		Dec	Jan	Annual		Dec	Jan
	2000	2001P	2001P	2002	2000	2001P	2001P	2002	2000	2001P	2001P	2002
	$ million											
North Atlantic												
Maine	262	262	22	23	242	230	15	15	504	492	37	39
New Hampshire	60	60	5	5	94	92	7	6	154	152	12	11
Vermont	441	483	37	41	67	67	4	3	508	549	40	43
Massachusetts	91	91	8	8	301	284	17	11	392	375	25	19
Rhode Island	8	8	1	1	40	40	6	2	48	48	7	3
Connecticut	165	169	15	13	337	336	34	15	503	505	49	28
New York	1,934	2,232	169	181	1,189	1,176	94	69	3,123	3,409	262	250
New Jersey	193	193	8	14	619	599	33	24	812	792	41	38
Pennsylvania	2,781	3,141	241	190	1,252	1,274	115	112	4,033	4,415	356	302
North Central												
Ohio	1,751	1,868	142	146	2,654	2,794	187	295	4,405	4,662	329	441
Indiana	1,695	1,865	149	110	2,886	3,156	258	437	4,581	5,022	407	547
Illinois	1,710	1,728	142	118	5,312	5,529	381	1,059	7,022	7,258	523	1,177
Michigan	1,335	1,480	117	110	2,140	2,028	181	151	3,475	3,507	298	262
Wisconsin	3,804	4,374	335	365	1,416	1,338	126	94	5,221	5,712	461	458
Minnesota	3,875	4,049	306	316	3,647	3,606	419	370	7,522	7,655	725	686
Iowa	5,747	6,035	504	431	5,027	5,361	507	601	10,774	11,397	1,011	1,032
Missouri	2,677	2,627	210	216	1,890	2,093	197	266	4,567	4,719	407	482
North Dakota	639	620	45	72	2,050	2,213	249	233	2,689	2,833	294	305
South Dakota	2,035	2,004	173	180	1,755	1,770	106	134	3,790	3,774	279	315
Nebraska	5,923	5,764	408	500	3,029	3,296	369	446	8,952	9,061	777	945
Kansas	5,488	5,638	431	567	2,417	2,494	279	302	7,905	8,132	710	869
Southern												
Delaware	557	555	40	48	184	185	8	7	741	740	48	54
Maryland	848	962	74	65	625	628	39	31	1,473	1,591	113	96
Virginia	1,549	1,553	109	129	732	784	59	51	2,281	2,337	168	180
West Virginia	339	340	25	24	51	58	4	5	391	398	29	30
North Carolina	4,275	4,367	350	206	3,135	3,125	296	186	7,410	7,492	646	392
South Carolina	792	784	60	62	752	752	61	41	1,544	1,536	121	103
Georgia	3,105	3,457	261	286	1,945	1,968	228	101	5,050	5,424	489	387
Florida	1,378	1,447	124	134	5,573	5,371	967	609	6,951	6,818	1,091	743
Kentucky	2,335	2,325	123	170	1,271	1,292	203	277	3,605	3,617	326	447
Tennessee	990	966	103	77	1,030	1,149	141	111	2,020	2,115	244	188
Alabama	2,684	2,932	210	232	588	726	98	53	3,272	3,659	307	285
Mississippi	2,037	2,224	166	194	886	1,271	139	93	2,922	3,494	305	287
Arkansas	3,248	3,490	267	296	1,639	2,001	179	144	4,887	5,490	446	441
Louisiana	653	657	44	58	1,167	1,227	258	140	1,820	1,884	302	198
Oklahoma	3,441	3,353	258	285	779	819	71	64	4,220	4,172	330	349
Texas	9,162	9,465	701	897	4,181	4,546	612	380	13,344	14,012	1,314	1,277
Western												
Montana	1,102	1,064	72	86	704	619	72	65	1,806	1,683	145	151
Idaho	1,628	1,895	151	163	1,761	1,668	199	146	3,389	3,564	350	309
Wyoming	795	746	44	52	160	139	18	8	954	885	63	59
Colorado	3,332	3,261	194	265	1,229	1,288	168	131	4,561	4,549	362	397
New Mexico	1,613	1,775	144	169	473	518	50	31	2,086	2,292	194	200
Arizona	1,063	1,181	90	94	1,226	1,427	194	271	2,290	2,609	284	366
Utah	770	803	72	69	240	257	25	17	1,010	1,060	97	86
Nevada	237	238	17	21	149	164	18	16	386	402	35	36
Washington	1,710	1,836	151	145	3,339	3,429	302	249	5,050	5,266	453	394
Oregon	826	830	74	71	2,223	2,263	164	120	3,049	3,094	238	191
California	6,269	7,300	538	557	19,241	18,909	1,268	873	25,510	26,209	1,806	1,430
Alaska	32	32	3	2	20	20	1	1	52	52	4	4
Hawaii	87	87	7	8	444	404	33	32	530	491	39	39
U.S.	99,473	104,615	7,937	8,469	94,113	96,787	9,460	8,900	193,586	201,402	17,396	17,369

Annual values for the most recent year are preliminary and were estimated as of the 20th of the month prior to publication. Totals may not add because of rounding. 1. Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realized on redemptions during the period.

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Table 35—CCC Net Outlays by Commodity & Function

	Fiscal year									
	1994	1995	1996	1997	1998	1999	2000	2001	2002 [4]	2003 [4]
	$ million									
Commodity/Program										
Feed grains:										
Corn	625	2,090	2,021	2,587	2,873	5,402	10,136	6,297	3,241	1,803
Grain sorghum	130	153	261	284	296	502	979	478	206	202
Barley	202	129	114	109	168	224	397	217	97	85
Oats	5	19	8	8	17	41	61	36	14	8
Corn and oat products	10	1	0	0	0	0	6	8	12	0
Total feed grains	972	2,392	2,404	2,988	3,354	6,169	11,579	7,036	3,570	2,098
Wheat and products	1,729	803	1,491	1,332	2,187	3,435	5,321	2,922	1,383	1,053
Rice	836	814	499	459	491	911	1,774	1,423	1,058	1,029
Upland cotton	1,539	99	685	561	1,132	1,882	3,809	1,868	3,657	1,729
Tobacco	693	-298	-496	-156	376	113	657	386	-95	-96
Dairy	158	4	-98	67	291	480	684	1,140	57	48
Soybeans	-183	77	-65	5	139	1,289	2,840	3,281	3,420	2,352
Peanuts	37	120	100	6	-11	21	35	136	-17	0
Sugar	-24	-3	-63	-34	-30	-51	465	31	-295	-44
Honey	0	-9	-14	-2	0	2	7	23	-3	0
Wool and mohair	211	108	55	0	0	10	-2	38	-1	0
Operating expense [1]	6	6	6	6	5	4	60	5	6	6
Interest expenditure	-17	-1	140	-111	76	210	736	428	228	228
Export programs [2]	1,950	1,361	-422	125	212	165	216	-2,047	649	556
1988-2000 Disaster/tree/ livestock assistance	2,566	660	95	130	3	2,241	1,452	2,326	128	0
Conservation Reserve Program	0	0	2	1,671	1,693	1,462	1,511	1,658	1,821	1,856
Other conservation programs	0	0	7	105	197	292	263	288	286	263
Other	-137	-103	320	104	28	588	858	1,163	1,590	547
Total	10,336	6,030	4,646	7,256	10,143	19,223	32,265	22,105	17,442	11,625
Function										
Price support loans (net)	527	-119	-951	110	1,128	1,455	3,369	3,189	5,303	3,741
Cash direct payments: [3]										
Production flexibility contract	0	0	5,141	6,320	5,672	5,476	5,057	4,105	3,962	3,980
Market loss assistance	0	0	0	0	0	3,011	11,046	5,455	113	0
Deficiency	4,391	4,008	567	-1,118	-7	-3	1	-1	0	0
Loan deficiency	495	29	0	0	478	3,360	6,419	5,293	5,201	2,918
Oilseed	0	0	0	0	0	0	460	921	0	0
Cotton user marketing	149	88	34	6	416	280	446	237	87	4
Other	22	9	61	1	0	1	461	820	18	1
Conservation Reserve Program	0	0	2	1,671	1,693	1,435	1,476	1,625	1,804	1,856
Other conservation programs	0	0	0	85	156	247	215	229	244	217
Noninsured Assistance (NAP)	0	0	2	52	23	54	38	64	156	199
Total direct payments	5,057	4,134	5,807	7,017	8,431	13,861	25,619	18,748	11,585	9,175
1988-2000 crop disaster	2,461	577	14	2	-2	1,913	1,251	1,848	94	0
Emergency livestock/tree/DRAP livestock indemn./forage assist.	105	83	81	128	5	328	201	478	34	0
Purchases (net)	293	-51	-249	-60	207	668	120	-1,310	-1,459	-2,569
Producer storage payments	12	23	0	0	0	0	0	0	0	0
Processing, storage, and transportation	112	72	51	33	38	62	81	122	139	118
Export donations ocean transportation	156	50	69	34	40	323	370	362	320	7
Operating expense [1]	6	6	6	6	5	4	60	5	6	6
Interest expenditure	-17	-1	140	-111	76	210	736	428	228	228
Export programs [2]	1,950	1,361	-422	125	212	165	216	-2,047	649	556
Other	-326	-105	100	-28	3	234	242	282	543	363
Total	10,336	6,030	4,646	7,256	10,143	19,223	32,265	22,105	17,442	11,625

1. Does not include CCC Transfers to General Sales Manager. 2. Includes Export Guarantee Program, Direct Export Credit Program, CCC Transfers to the General Sales Manager, Market Access (Promotion) Program, starting in FY 1991 and starting in FY 1992 the Export Guarantee Program - Credit Reform, Export Enhancement Program, Dairy Export Incentive Program, and Technical Assistance to Emerging Markets, and starting in FY 2000 Foreign Market Development Cooperative Program and Quality Samples Program. 3. Includes cash payments only. Excludes generic certificates in FY 1986-96. 4. Estimated in FY 2003 President's Budget which was released on February 4, 2002 based on October 2001 supply & demand estimates. The CCC outlays shown for 1996-2002 include the impact of the Federal Agriculture Improvement and Reform Act of 1996, which was enacted on April 4, 1996, and FY 2000-FY 2003 outlays include the impact of the Agricultural Risk Protection Act of 2000, which was enacted on June 20, 2000. FY 2001 outlays include the impact of the $5.5 billion of payments mandated by P.L. 107-25.
Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).
Information contact: Richard Pazdalski, Farm Service Agency at (202) 720-3675 or Richard_Pazdalski@wdc.fsa.usda.gov .

Food Expenditures

Table 36—Food Sales

	Annual			2002			Year-to-date cumulative		
	1998	1999	2000	Jan	Feb	Mar	Jan	Feb	Mar
				$ billion					
Sales[1]									
At home[2]	390.1	407.6	442.4	36.7	34.7	37.4	36.7	71.5	108.9
Away from home[3]	310.4	332.7	359.9	28.9	28.9	32.4	28.9	57.8	90.2
				1998 $ billion					
Sales[1]									
At home[2]	390.1	400.0	424.4	33.7	31.8	32.5	33.7	65.4	97.9
Away from home[3]	310.4	324.3	341.7	26.4	26.3	29.5	26.4	52.7	82.2
				Percent change from year earlier ($ billion)					
Sales[1]									
At home[2]	3.9	4.5	8.5	1.9	1.6	-0.4	1.9	1.8	1.0
Away from home[3]	4.4	7.2	8.2	4.1	5.3	4.1	4.1	4.7	4.5
				Percent change from year earlier (1998 $ billion)					
Sales[1]									
At home[2]	1.6	2.5	6.1	-0.7	-0.8	-7.7	-0.7	-0.7	-3.2
Away from home[3]	1.7	4.5	5.4	1.2	2.2	1.3	1.2	1.7	1.6

-- = Not available. 1. Food only (excludes alcoholic beverages). Not seasonally adjusted. 2. Excludes donations and home production.
3. Excludes donations, child nutrition subsidies, and meals furnished to employees, patients, and inmates. *Information contact: Annette Clauson (202) 694-5389*
Note: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food, excluding alcoholic beverages and pet food which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced and consumed on farms and food furnished to employees; (4) this series includes all sales of meals and snacks, while PCE includes only purchases using personal funds, excluding business travel and entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," ERS Ag. Econ. Rpt. No. 575, Aug. 1987, available at http://www.ers.usda.gov/publications/aer575/

Transportation

Table 37—Rail Rates; Grain & Fruit-Vegetable Shipments

	Annual			2001				2002		
	1999	2000	2001	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Rail freight rate index[1] (Dec. 1984=100)										
All products	113.0	114.5	116.9	116.0	118.0	117.9	118.9	119.9	118.9	118.6
Farm products	121.7	123.1	124.3	124.6	125.4	125.8	124.3	124.9	124.9	124.9
Grain food products	99.7	100.4	102.8	102.2	103.1	103.4	103.0	103.2	103.1	103.2
Grain shipments										
Rail carloadings (1,000 cars)[2]	24.2	21.8	21.6	23.2	26.1	23.1	20.6	22.3	22.5	20.5
Barge shipments (mil. ton)[3]	3.5	3.1	2.9	2.6	2.6	3.9	3.7	1.2	2.0	--
Fresh fruit and vegetable shipments[4]										
Piggy back (mil. cwt)	0.7	0.8	0.8	0.9	0.6	0.8	0.6	0.8	0.6	0.7
Rail (mil. cwt)	1.1	1.4	1.4	1.5	1.3	1.7	1.7	1.7	1.0	1.5
Truck (mil. cwt)	45.2	45.0	44.0	46.0	40.9	40.5	41.6	38.1	35.8	39.1

-- = Not available. 1. Department of Labor, Bureau of Labor Statistics. 2. Weekly average; from Association of American Railroads. 3. Shipments on Illinois and Mississippi waterways, U.S. Corps of Engineers. 4. Annual data are monthly average. Agricultural Marketing Service, USDA.
Information contact: Allen Baker (202) 694-5290

Indicators of Farm Productivity

Table 38—Indexes of Farm Production, Input Use, & Productivity[1]

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
					1992 = 100					
Farm output	88	83	89	94	94	100	94	107	101	106
All livestock products	92	93	94	95	98	100	100	108	110	109
Meat animals	95	97	97	96	99	100	100	102	103	100
Dairy products	94	96	95	98	98	100	99	114	115	115
Poultry and eggs	81	83	86	92	96	100	104	110	114	119
All crops	86	75	86	92	92	100	90	106	96	103
Feed crops	84	62	85	88	86	100	76	102	83	98
Food crops	84	76	83	107	82	100	96	97	90	93
Oil crops	88	72	88	87	94	100	85	115	99	107
Sugar	95	91	91	92	96	100	95	106	98	94
Cotton and cottonseed	92	96	75	96	109	100	100	122	110	117
Vegetables and melons	90	81	85	93	97	100	97	113	108	112
Fruit and nuts	95	102	98	97	96	100	107	111	102	102
Farm input[1]	101	100	100	101	102	100	101	102	101	100
Farm labor	101	103	104	102	106	100	96	96	92	100
Farm real estate	100	100	102	101	100	100	98	99	98	99
Durable equipment	120	113	108	105	103	100	97	94	92	89
Energy	102	102	101	100	101	100	100	103	109	104
Fertilizer	106	97	94	97	98	100	111	109	85	89
Pesticides	92	79	93	90	100	100	97	103	94	106
Feed, seed, and purchased livestock	97	96	91	99	99	100	101	102	109	95
Inventories	102	98	93	97	100	100	104	99	108	104
Farm output per unit of input	87	83	90	93	92	100	94	105	100	106
Output per unit of labor										
Farm[2]	87	81	86	92	89	100	98	111	110	106
Nonfarm[3]	95	95	96	96	97	100	100	101	--	--

-- = Not available. Values for latest year preliminary. 1. Includes miscellaneous items not shown separately. 2. Source: Economic Research Service.

3. Source: Bureau of Labor Statistics. *Information contact: John Jones (202) 694-5614*

Food Supply & Use

Table 39—Per Capita Consumption of Major Food Commodities[1]

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
					Lbs.					
Red meats [2,3,4]	111.6	113.5	111.3	113.6	113.6	111.1	109.1	113.3	115.1	113.5
Beef	62.9	62.5	61.0	63.0	63.6	64.1	62.7	63.6	64.4	64.4
Veal	0.8	0.8	0.8	0.8	0.8	1.0	0.8	0.7	0.6	0.5
Lamb & mutton	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.9	0.8	0.8
Pork	46.8	49.2	48.5	49.0	48.4	45.2	44.8	48.2	49.4	47.7
Poultry [2,3,4]	58.2	60.5	62.0	62.7	62.1	63.1	63.1	63.7	66.8	66.5
Chicken	44.1	46.5	48.2	48.8	48.2	48.8	49.5	49.8	52.9	52.9
Turkey	14.0	14.0	13.9	13.9	13.9	14.3	13.6	13.9	13.8	13.6
Fish and shellfish [3]	14.8	14.6	14.8	15.0	14.8	14.5	14.3	14.5	14.9	15.2
Eggs [4]	30.0	30.1	30.1	30.3	29.9	29.9	30.2	30.8	32.1	32.2
Dairy products										
Cheese (excluding cottage) [2,5]	25.0	25.9	26.1	26.6	26.9	27.3	27.5	27.8	29.0	29.8
American	11.0	11.3	11.3	11.4	11.7	11.8	11.8	11.9	12.6	--
Italian	9.3	9.9	9.8	10.2	10.3	10.6	10.8	11.1	11.5	--
Other cheeses [6]	4.6	4.7	5.0	5.0	5.0	4.9	4.9	4.7	4.9	--
Cottage cheese	3.3	3.1	2.9	2.8	2.7	2.6	2.6	2.7	2.6	2.6
Beverage milks [2]	220.5	217.2	211.8	211.4	207.2	206.8	203.2	200.5	199.2	194.9
Fluid whole milk [7]	87.1	83.5	79.5	78.0	74.4	73.5	71.4	70.2	70.7	69.8
Fluid lower fat milk [8]	109.6	108.8	105.8	104.9	101.3	100.1	98.1	96.6	96.0	95.1
Fluid skim milk	23.8	24.9	26.5	28.5	31.5	33.2	33.7	33.7	32.5	30.0
Fluid cream products [9]	7.7	8.0	8.0	8.0	8.3	8.6	8.9	9.0	9.5	9.9
Yogurt (excluding frozen)	4.2	4.2	4.2	4.6	5.0	4.8	5.1	5.0	4.9	5.4
Ice cream	16.2	16.2	16.0	16.0	15.5	15.6	16.1	16.3	16.7	16.5
Lowfat ice cream [10]	7.4	7.0	6.9	7.5	7.4	7.5	7.8	8.1	7.5	7.5
Frozen yogurt	3.5	3.1	3.5	3.4	3.4	2.5	2.0	2.1	1.9	1.8
All dairy products, milk equivalent, milkfat basis [11]	564.1	563.0	569.8	580.1	576.6	566.6	567.5	572.8	584.9	593.0
Fats and oils--total fat content	64.6	66.5	69.2	67.3	65.4	64.2	63.7	64.3	67.0	74.5
Butter and margarine (product weight)	14.8	15.2	15.6	14.7	13.6	13.3	12.5	12.6	12.6	12.8
Shortening	22.3	22.3	25.0	23.9	22.2	21.9	20.5	20.5	21.1	23.1
Lard and edible tallow (direct use)	1.8	3.5	3.4	4.2	4.3	4.6	4.0	5.1	5.6	5.9
Salad and cooking oils	26.3	27.1	26.6	25.9	26.5	25.7	28.1	27.3	28.8	33.7
Fruits and vegetables [12]	651.9	677.9	690.1	702.3	690.5	698.1	708.0	699.2	705.4	707.7
Fruit	254.2	282.0	280.8	287.7	282.0	279.0	289.6	284.1	289.8	279.4
Fresh fruits	112.5	122.9	123.6	125.0	122.6	126.1	129.5	128.9	129.5	126.8
Canned fruit	19.7	22.8	20.6	20.7	17.3	18.4	20.1	17.0	19.2	17.4
Dried fruit	12.2	10.7	12.5	12.7	12.7	11.1	10.6	12.1	10.2	10.5
Frozen fruit	3.8	3.9	3.7	3.7	4.2	3.9	3.6	4.1	3.7	3.7
Selected fruit juices	105.5	121.1	120.2	125.1	125.0	119.2	125.2	121.6	126.8	120.6
Vegetables	397.7	395.9	409.3	414.6	408.5	419.1	418.4	415.1	415.6	428.3
Fresh	170.8	174.2	180.8	186.8	180.9	186.0	190.2	186.4	191.9	201.7
Canning	114.0	111.7	112.0	111.2	109.4	107.8	106.0	107.1	103.3	104.7
Freezing	72.4	70.5	75.4	77.6	78.9	83.4	81.6	80.5	81.0	79.7
Dehydrated and chips	32.7	31.4	33.4	30.7	31.0	33.9	32.7	32.5	30.6	33.7
Pulses	7.8	8.1	7.7	8.3	8.3	7.9	7.9	8.7	8.8	8.6
Peanuts (shelled)	6.5	6.2	6.0	5.7	5.6	5.6	5.8	5.8	6.0	5.7
Tree nuts (shelled)	2.2	2.2	2.3	2.3	1.9	1.9	2.1	2.2	2.5	2.5
Flour and cereal products [13]	182.3	184.7	189.3	192.0	190.3	196.3	197.3	196.1	196.9	199.9
Wheat flour	136.6	138.1	142.2	143.0	140.1	146.5	146.9	144.9	144.0	146.3
Rice (milled basis)	16.2	16.7	16.6	18.0	18.7	17.6	18.1	18.3	19.5	19.7
Caloric sweeteners [14]	137.5	140.5	143.4	145.9	148.0	148.5	151.3	152.6	155.0	152.4
Coffee (green bean equiv.)	10.3	10.0	9.0	8.1	7.9	8.7	9.1	9.3	9.8	10.3
Cocoa (chocolate liquor equiv.)	4.6	4.5	4.3	3.8	3.6	4.2	4.0	4.3	4.5	4.7

-- = Not available. 1. In pounds, retail weight unless otherwise stated. Consumption normally represents total supply minus exports, nonfood use, and ending stocks. Calendar-year data, except fresh citrus fruits, peanuts, tree nuts, and rice, which are on crop-year basis. 2. Totals may not add due to rounding. 3. Boneless, trimmed weight. Chicken series revised to exclude amount of ready-to-cook chicken going to pet food as well as some water leakage that occurs when chicken is cut up before packaging. 4. Excludes shipments to the U.S. territories. 5. Whole and part-skim milk cheese. Natural equivalent of cheese and cheese products. 6. Includes Swiss, Brick, Muenster, cream, Neufchatel, Blue, Gorgonzola, Edam, and Gouda. 7. Plain and flavored. 8. Plain and flavored, and buttermilk. 9. Heavy cream, light cream, half and half, eggnog, sour cream, and dip. 10. Formerly known as ice milk. 11. Includes condensed and evaporated milk and dry milk products. 12. Farm weight. 13. Includes rye, corn, oats, and barley products. Excludes quantities used in alcoholic beverages, corn sweeteners, and fuel. 14. Dry weight equivalent.

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